

Public Utilities

FOR A NIGHT

Volume 63 No. 7

March 26, 1959



COAL BY WIRE

By A. W. Vogtle

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A State Commission Quiz on Depreciation Practices

By Myron H. Ross

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Producer and Gas Pipeline Yardsticks

By Arthur K. Lee

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The Due Diligence Meeting—Challenge And Opportunity

By Fenton L. B. Brown

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Public Utilities

FORTNIGHTLY

VOLUME 63

MARCH 26, 1959

NUMBER 7



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Pages with the Editors

EARLY in the present century a small group of progressives—then identified with the "Bull Moose" movement of the late Teddy Roosevelt—began to worry about conservation of natural resources, including electric power. Among other things which grew out of their studies and surveys was the fascinating idea that electric power need not necessarily be generated—even with coal or other fuel—in or near our great cities. They thought the job could be done at or near the coal mines.

THIS old theory of mouth-of-mine generating stations naturally had a strong appeal in coal-mining areas, such as Pennsylvania and West Virginia. The theory was that by generating electricity in plants situated in or near the coal mines, power could be sent hundreds of miles into the cities via a network of high-voltage transmission lines. This would eliminate not only the costly traffic in freight movement of coal but the smoke and grime of coal combustion within the congested areas, as well as the expense and nuisance of ash removal.

UNFORTUNATELY, the early protagonists of a so-called "giant power" network of high-voltage transmission lines, shuttling power from the mines to the cities,



ARTHUR K. LEE

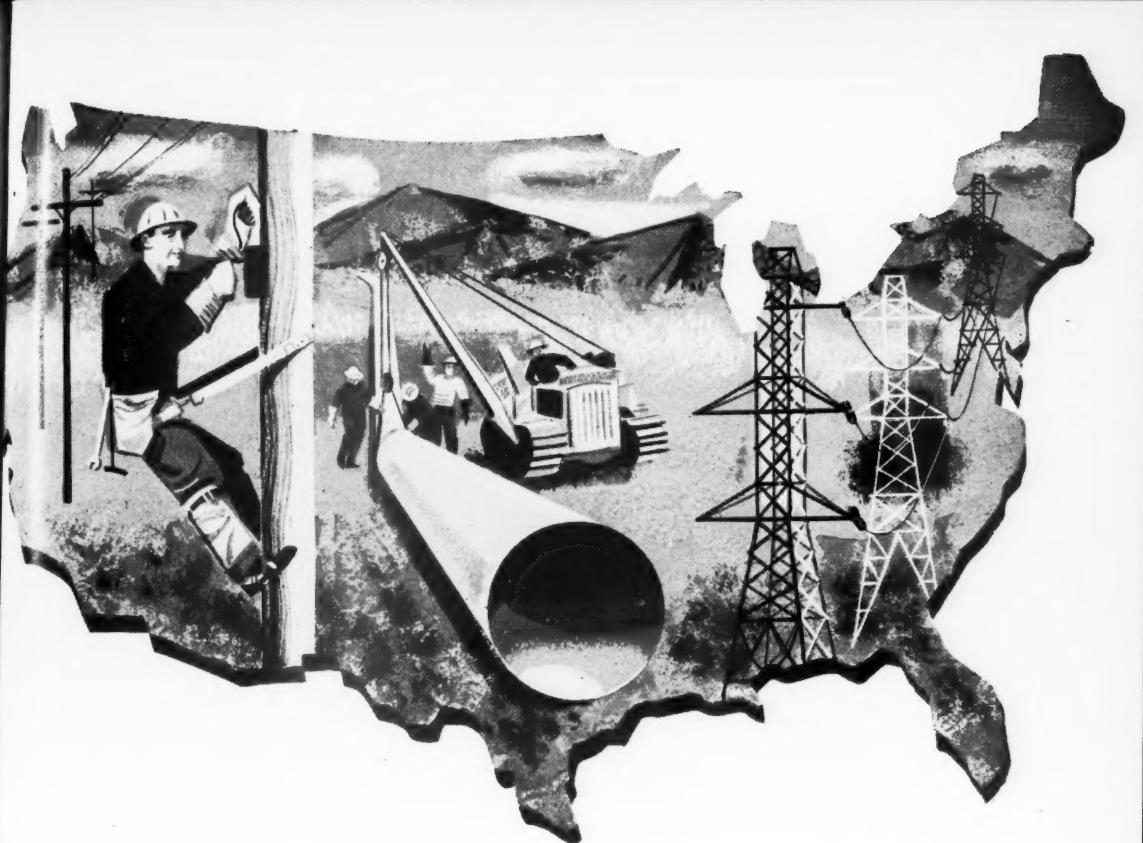
were considerably ahead of their time. For one thing, they overlooked the important factor of cooling waters necessary for fuel-burning generating plants, but not generally found in mountainous coal-mining country. Another equally obstructive factor was the deficiency of adequate transmission facilities at that early date. The techniques of high-voltage transmission were then in a relatively primitive state compared with what is known and practiced today.

AND so the early dreams of smoke-free cities, freely using an electric power supply imported over high lines running to generating stations at the mouth of the mines, were shattered on the bleak realities of practical economics. It was still cheaper then to ship coal, even if the technology of long-distance transmission could be achieved and the problem of cooling water supply solved.

BUT today we face an entirely different situation. Electric power can now be transmitted safely and economically at voltages and over distances which electrical engineers would not have thought likely a mere two decades ago. On the other side, the cost of hauling coal by rail has gone up.



A. W. VOGTLE



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PAGES WITH THE EDITORS (*Continued*)

There is also the obvious fact that we are coming to an end of feasible sites for hydroelectric development in this country—a source of power which has long been such a potent competitor of steam-generated power.

PERHAPS most important of all is a factor which has become a matter of serious concern to our larger cities in recent years; that is, the problem of abating smog, smoke, and flying ash nuisances. And so at this late date the early vision of "coal by wire" is receiving wider acceptance.

THE leading article in this issue is written for us by an expert in the field of coal utilization. He is A. W. VOGTLE, vice president and secretary of the DeBardeleben Coal Corporation of Birmingham, Alabama. A native of Bessemer, Alabama, and educated at the Christian Brothers College of Memphis, Tennessee, MR. VOGTLE has been associated with the DeBardeleben Corporation since 1917. His company not only produces coal but manufactures coke and coke chemicals for both domestic sales and foreign export. He has long been active in business, civic, and professional organizations, principally those dealing with coal, coke, chemicals, and transport, as well as southern commerce and industrial science.

* * * *

ARTHUR K. LEE, chairman of the board of United Cities Gas Company, whose article on producer and gas pipeline yardsticks begins on page 451, has been a businessman, banker, and state senator during the initial development of the oil and gas business in Wyoming. In 1928 he moved to Kansas and was associated with the discovery of the Hugoton gas fields in that state. His efforts to work out an arrangement for securing a gas supply for Colorado Springs were among the incidents considered by the Federal Trade Commission and Congress prior to the enactment of the Natural Gas Act of 1938. In recent years Mr. LEE's headquarters has been in Chicago where he heads the group of natural gas distribution systems associated with his present organization.



MYRON H. ROSS

His article is written frankly from the standpoint of the gas utility distributor and its customers. He believes that the constant increase in the price of natural gas requires more effective regulation of production rather than its exemption or release from regulation.

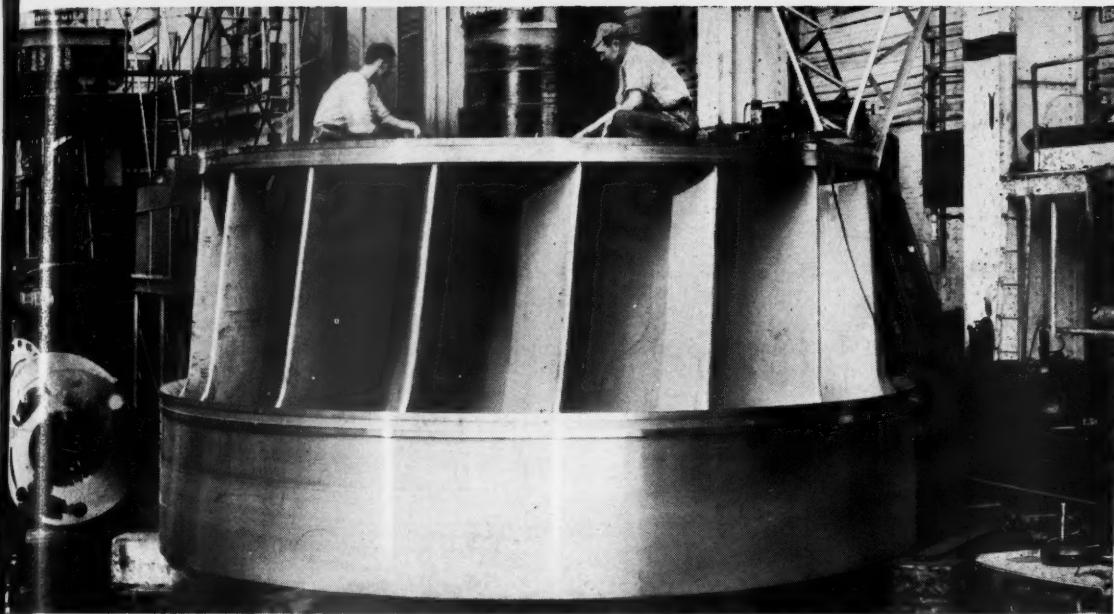
* * * *

MYRON H. ROSS, assistant professor of economics of Knox College, Galesburg, Illinois, came to develop the article about the prevailing regulatory practices in the field of public utility depreciation while participating in a research seminar at the University of Wisconsin. During his attendance at this seminar, which was sponsored by the Ford Foundation, PROFESSOR ROSS worked out a questionnaire with the assistance of A. R. Colbert, chief of the accounts and finance department of the Wisconsin Public Service Commission. He sent this questionnaire to all the state commissions and received a surprising number of replies—many written in a frank and informal manner which may well reflect state regulatory thinking.

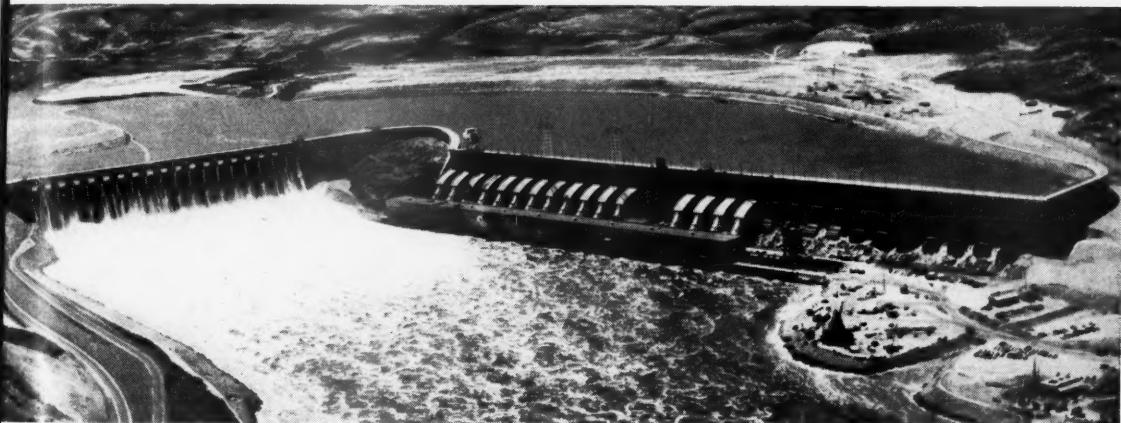
PROFESSOR ROSS is a graduate of Temple University (BS, '47; MA, '47). He joined the Knox College faculty in 1956.

THE next number of this magazine will be out April 9th.

The Editors



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Coming IN THE NEXT ISSUE

(April 9, 1959, issue)

YOUR FUTURE—YOUR REWARD—YOUR DUTY

J. E. Corette, president of the Edison Electric Institute, as well as president of The Montana Power Company, has prepared for PUBLIC UTILITIES FORTNIGHTLY a special statement dealing with the future responsibility of those who make their livelihood in the electric power industry as well as those who are concerned with its welfare and continued fulfillment of its public service obligations. Mr. Corette stresses the importance of the responsibility we all have, to take an interest in the financial integrity of our government. He refers to the problems which the industry faces as it gathers for the annual convention of the Edison Electric Institute at New Orleans, Louisiana, April 6th to 8th.

THE VAST POTENTIAL OF MORE POWER USAGE

Although the electric utility industry has always successfully met the challenge of phenomenal increases in demands for more and more power, much remains to be done in this area. R. S. Stevenson, president of Allis-Chalmers Manufacturing Company, has given us a broad view of the horizon which beckons the electric utilities. Public benefits are so tremendous that we cannot really afford the delay of making new applications of electric power, as well as more utilization of existing services. Everyone wins in this effort to bring more and more kilowatt-hours to market.

PRIVATE INDUSTRY'S STAKE IN THE ATOM POWER RACE

U. S. Senator Albert Gore has long been a most active and articulate proponent of more activity in atomic power plant development by the United States. Granted that atomic power will become competitive earlier in foreign countries, which do not have plentiful cheap fossil fuels as in the United States, Senator Gore still thinks it essential that the Atomic Energy Commission and the private companies also, to the fullest extent that they can participate, should press forward with practical developments in this field. He commends the electric utility industry for the job it has done in supplying the power demands of the nation to date, and notes the economic complexity of atomic plant financing. But he thinks a practical solution must be found to the program of forging ahead, if America is not to be surpassed in this important international atom power derby.

NEW GUIDE LINES FOR GROWING RURAL UTILITIES

The Rural Electrification Administration is now giving careful consideration to long-range planning for its borrowing utilities. After World War II it was obvious that farm use of power had been greatly underestimated. Administrator David A. Hamil here tells the story of how REA's planning range has been upgraded from two to ten years, but with elastic provisions of area and transitional variations.

STOCKHOLDER RELATIONS versus RESPONSIBILITIES TO STOCKHOLDERS

In recent years a number of utility companies have adopted or broadened investor relations programs. Paul Hallingby, Jr., of White, Weld & Co., has reviewed trends in recent development of such stockholder relation programs by public utility management. He gives some down-to-earth suggestions for establishing a better rapport between management and the investor, to the benefit and satisfaction of both.

TECHNICAL ECONOMIES IN BELGIUM'S ELECTRIC OPERATIONS

From his experience as a European consulting engineer, J. F. Van Rysselberge, formerly with SOFINA, and until recently with Middle West Service Company, describes the postwar benefits of the increased use of power pooling in Belgium.



Also . . .

Special financial news, digests, and interpretations of court and commission decisions, general news happenings, reviews, Washington gossip, and other features of interest to public utility regulators, companies, executives, financial experts, employees, investors, and others.

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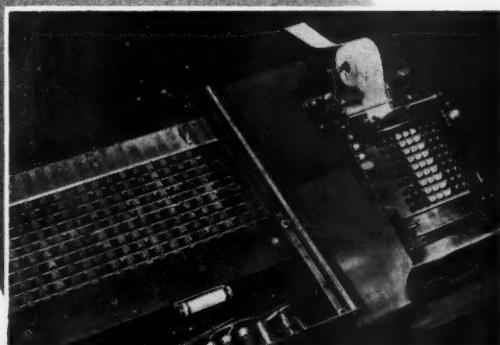
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Columnist.

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*President, University of
Southern California.*

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GEORGE B. CLYDE
Governor of Utah.

"In this age of the atom, the U. S. needs more scientists, engineers, and people from other professions to deal with the new technical and human problems which are becoming a daily part of the business of U. S. government. The concentration of lawyers in high-level U. S. elective and appointive positions not only leads to an imbalance in governmental thinking but violates the original constitutional concept of electing policy-making federal and state representatives from all walks of U. S. life."

ROGER M. BLOUGH
*Chairman of the board, United
States Steel Corporation.*

"The members of Congress are accountable directly to the people of their respective constituencies. They are not accountable directly to the owners, the customers, or the employees of any business or enterprise, as management is. And for government or any committee of Congress to try to usurp the functions of management—either by intimidation or by law—is as alien to our American constitutional concepts as for business to try to usurp the functions of government."

EDITORIAL STATEMENT
The Wall Street Journal.

" . . . the change in the political complexion of the farm problem is evident. And we think that change contains a lesson for all lawmakers and others who think that political 'imperatives' are unalterable—that 'the people,' or this or that sizable segment of same, demand ever more public power, more social security, more subsidies, more federal intervention and spending of all kinds of their 'welfare.' The politicians who are convinced the United States can move only in the direction of government paternalism and regimentation may one day find themselves on the wrong side of some issues."

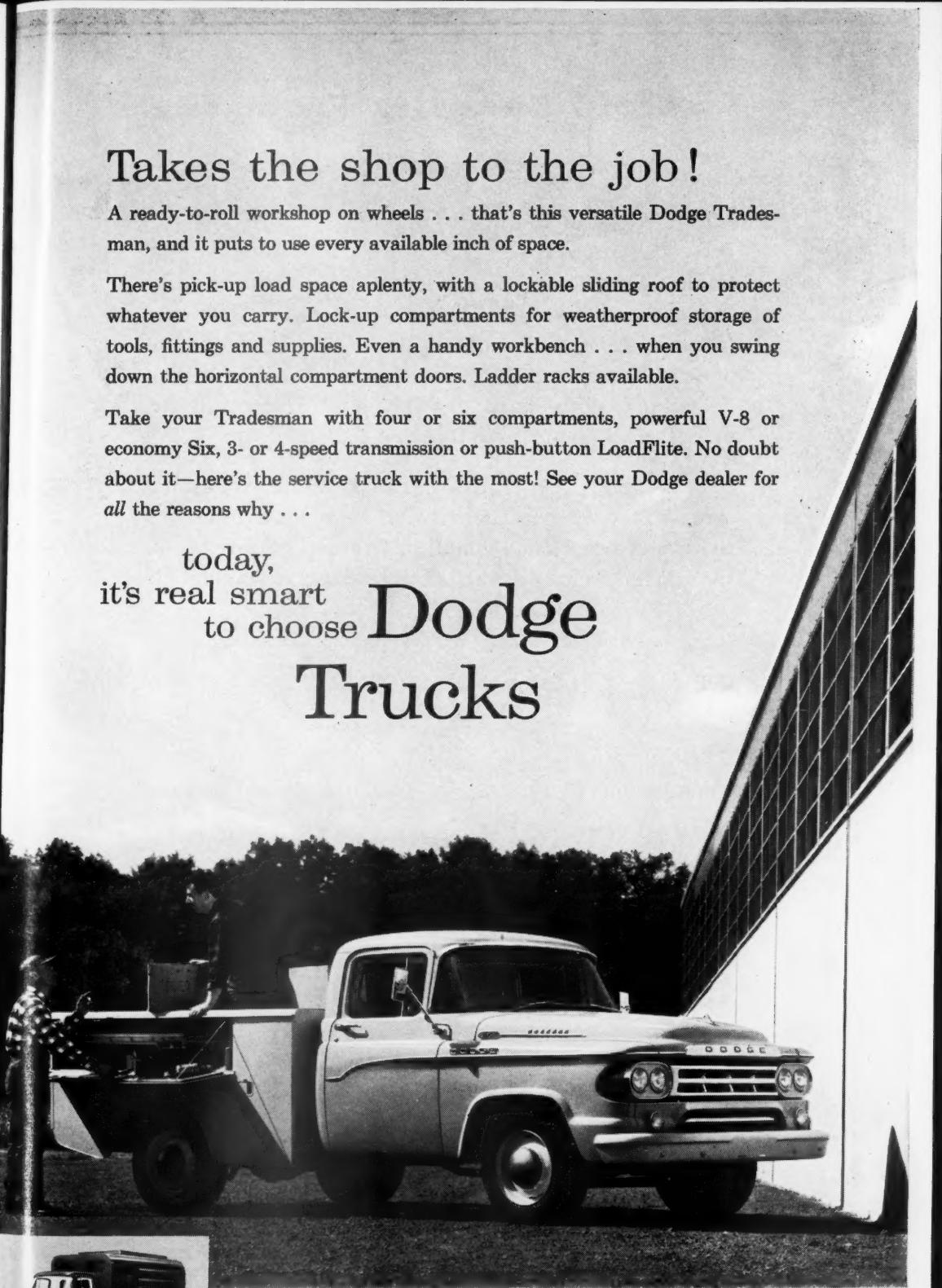
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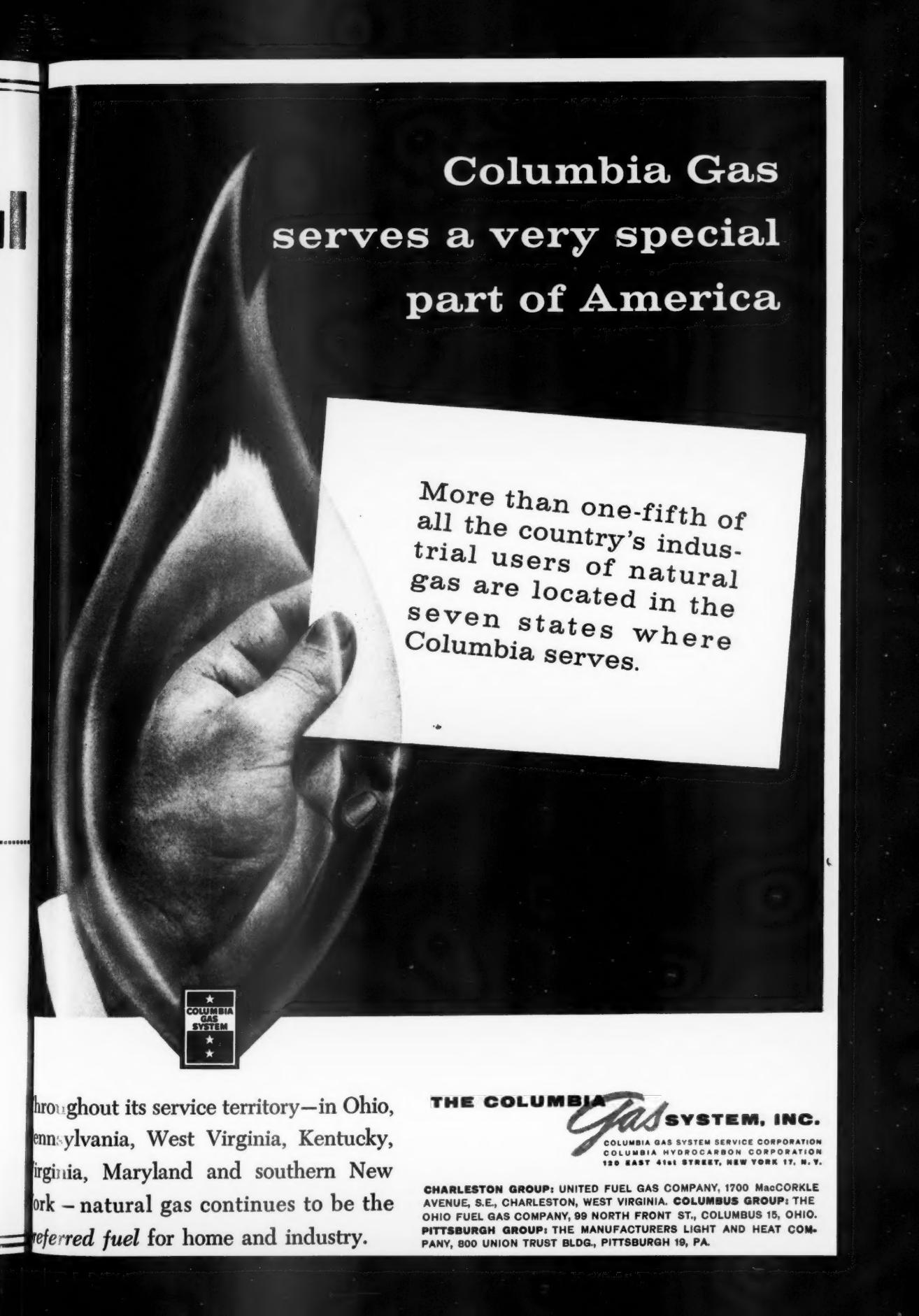
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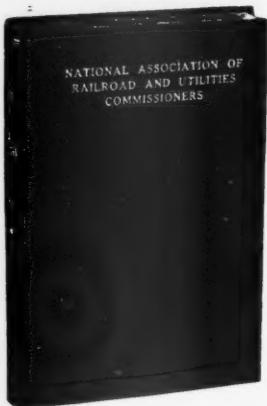


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NOTE: 1958 Revised Uniform System of Accounts for Electric and Gas Utilities are in the process of being printed and will be available about May 1, 1959.

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UTILITIES

A·l·m·a·n·a·c·k

MARCH - APRIL

Thursday—26 <i>Oklahoma Utilities Association begins annual convention, Tulsa, Okla.</i>	Friday—27 <i>Ohio Telephone Association will hold annual convention, Columbus, Ohio. Apr. 13-15. Advance notice.</i>	Saturday—28 <i>Missouri Valley Electric Association will hold engineering conference, Kansas City, Mo. Apr. 15-17. Advance notice.</i>	Sunday—29 <i>American Water Works Association, Arizona Section, will hold meeting, Phoenix, Ariz. Apr. 16-18. Advance notice.</i>
Monday—30 <i>Pacific Coast Electrical Association begins engineering and operating conference, Long Beach, Cal.</i>	Tuesday—31 <i>American Power Conference begins, Chicago, Ill.</i> ③	APRIL Wednesday—1 <i>Gas Appliance Manufacturers Association begins annual meeting, Bal Harbour, Fla.</i>	Thursday—2 <i>American Institute of Electrical Engineers begins spring textile conference, Atlanta, Ga.</i>
Friday—3 <i>Mississippi Broadcasters Association begins annual meeting, Biloxi, Miss.</i>	Saturday—4 <i>United Press International Broadcasters of Minnesota Association begins spring meeting, Minneapolis, Minn.</i>	Sunday—5 <i>Fifth Nuclear Congress begins, Cleveland, Ohio.</i>	Monday—6 <i>Edison Electric Institute begins annual convention, New Orleans, La.</i>
Tuesday—7 <i>American Gas Association begins sales conference on industrial and commercial gas, Philadelphia, Pa.</i>	Wednesday—8 <i>Iowa Telephone Association ends two-day annual convention, Des Moines, Iowa.</i> ④	Thursday—9 <i>American Water Works Association, Montana Section, begins annual meeting, Glendive, Mont.</i>	Friday—10 <i>American Welding Society ends five-day meeting, Chicago, Ill.</i>



Courtesy, Consumers Power Company

A Boom for Lamplighters!

Way out on the end of a steel limb is this service truck operator, using a push-button boom that lifts him quickly to his job. He can step directly from his cab into the bucket while truck brakes are automatically locked.

Public Utilities

FORTNIGHTLY

VOLUME 63

MARCH 26, 1959

NUMBER 7



Coal by Wire

By A. W. VOGTLE*

Some estimates of how much coal electric utilities will use by 1975 are four times the amount used by them in 1958. The delivered price of this fuel will be greatly influenced by rail transportation costs. If they continue to rise, as they have in the past, electric utilities will be forced to use other transportation methods. One development may well be the location of plants near the fuel source and the utilization of high transmission lines.

WILL the ability to transmit higher voltages of electricity over longer distances play an increasingly important rôle in the location of future power plants? This improved technology may well affect the plant location pattern of those power companies which are largely dependent on steam created by the burning of coal. One reason is that transportation is a big cost factor in the price of coal to utilities. By materially reducing or eliminating this cost through an economical, close-to-fuel location and the

use of long-distance high-voltage power lines, a utility might well keep its production costs at an attractively low level.

Steam-generating utilities use coal in larger proportions than any other fuel. And because of coal's relative economy and efficiency, it will undoubtedly remain the principal fuel for a great many years to come.

With electricity production estimated to double every ten years, coal usage will likewise increase tremendously. Here are some interesting facts and figures on the possible future use of coal as related to other fuels:

*Vice president, DeBardeleben Coal Corporation, Birmingham, Alabama. For additional personal note, see "Pages with the Editors."

PUBLIC UTILITIES FORTNIGHTLY

FOR example, 2.4 trillion kilowatt-hours, with 60 per cent produced by coal at seven-tenths pounds of coal per kilowatt-hour, give a coal requirement of 504 million tons by 1975. But this is on the conservative side. The electric utility coal requirement by then could well be 627 million tons—over four times the 1958 consumption and exceeding by 247 million tons the total 1958 coal production.

Harllee Branch, Jr., president of The Southern Company, Atlanta, Georgia, projects the percentage sources of energy for the South's electric supply eighteen years hence in comparison with 1957, as follows:

	Coal	Water	Gas	Oil	Nuclear
1957	63.0	22.0	8.0	7.0	—
1975	86.6	6.2	2.3	1.7	3.2

This able utility executive also estimates all energy requirements of the United States as the equivalent of 2.8 billion tons of coal by 1975 and approximately 3.6 billion tons by 1983. The coal equivalent in 1956 was 1.48 billion tons.

This surging use of coal by the electric utility industry, with assured rapid continued expansion in tonnage, has helped the coal industry inasmuch as it has coincided with the discontinuance of coal as a railroad fuel because of dieselization.

It is also a boon to the railroads since open-top cars, no longer required for the nonrevenue railroad fuel coal of former years, are now turned to this revenue coal tonnage of the electric utilities in profitable volume lot transportation.

It will be noted from the table of coal distribution, 1946 to 1958, inclusive (page 435), that coal requirements of electric utilities have increased from 68.7 million tons in 1946 to 155 million tons in 1958, respectively 12.7 and 36.5 per cent of the

nation's total coal production, while railroad fuel requirements have declined from 110 million tons in 1946 to 4 million tons in 1958, respectively 20.3 and .9 per cent of total coal production.

High-voltage Transmission

EXTRAHIGH-VOLTAGE transmission of electricity, 230 kilovolts and above, is a comparatively recent development, but, with constant accumulating worldwide experience, it is moving forward in the principal industrial countries of the world with fast-gathering momentum.

Stimulus for the development of extra-high-voltage transmission and demonstration of its basic soundness were provided initially by the large hydroelectric power sources, remote from consumption centers.

In Sweden, for example, 85 per cent of the water power is in the north, but the consuming areas are in the south. Power transmission over a 230-kilovolt network from the north to the south was inaugurated in this country in 1936. First sections of the present 400-kilovolt system were placed in service in early 1952. Sweden is now studying the economies of a transition to 500 kilovolts, followed possibly to 650 kilovolts.

The hydroelectric production of France is confined to the mountains of southern France, whereas the load is in the more populated industrial north. The first 400-kilovolt line, 320 miles long, links the hydroelectric production of the Alps with the Paris area, the main consumption center.

Our nation's utilities now transmit electric power on high-voltage lines operating up to 362 kilovolts. The several European countries which operate systems above this voltage are topped by a planned Russian

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line to be operated at 525 kilovolts. The Russians also have an experimental line of 650 kilovolts.

These two decades of experience have led to solutions of many of the earlier com-

plex problems and have established that electrical transmission at high voltage is economical for movement of large blocks of power at high-load factors. There are also other important advantages.



THOUSANDS OF NET TONS

(1946 as 100 Per Cent)

Year	Electric Utilities		Railroads		Coke Plants	
	Tons	Pct.	Tons	Pct.	Tons	Pct.
1946	68,743	12.7	110,166	20.3	83,288	15.4
1947	86,009	14.0	109,296	17.8	104,800	17.1
1948	95,620	16.9	94,838	16.8	107,306	19.0
1949	80,610	17.0	68,123	14.4	91,236	19.3
1950	88,262	18.4	60,969	12.7	103,845	21.6
1951	101,898	19.4	54,005	10.3	113,448	21.6
1952	103,309	22.2	37,962	8.1	97,614	20.9
1953	112,283	24.4	27,735	6.0	112,874	24.5
1954	115,235	29.2	17,370	4.4	85,391	21.7
1955	140,550	29.6	15,473	3.3	107,377	22.6
1956	154,983	30.9	12,308	2.5	105,913	21.1
1957	157,398	32.1	8,401	1.7	107,971	22.0
1958	155,000	36.5	4,000	.9	85,000	20.0
(Est.)						

Year	Steel Mills		Cement Mills		Other Manufacturing And Msc.		Retail Dealers	
	Tons	Pct.	Tons	Pct.	Tons	Pct.	Tons	Pct.
1946	12,151	2.2	6,990	1.3	120,364	22.2	98,684	18.2
1947	14,195	2.3	7,919	1.3	127,015	20.7	96,657	15.7
1948	14,193	2.5	8,546	1.5	112,612	19.9	86,794	15.3
1949	10,529	2.2	7,966	1.7	98,685	20.8	88,389	18.7
1950	10,877	2.3	7,923	1.7	97,904	20.4	84,422	17.6
1951	11,269	2.1	8,507	1.6	105,408	20.1	74,378	14.2
1952	9,632	2.1	7,903	1.7	95,476	20.5	66,861	14.3
1953	8,764	1.9	8,167	1.8	96,999	21.1	59,976	13.0
1954	6,983	1.8	7,924	2.0	78,359	19.9	51,798	13.1
1955	7,353	1.5	8,529	1.8	91,110	19.2	53,020	11.2
1956	7,189	1.4	9,026	1.8	94,772	18.9	48,667	9.7
1957	6,938	1.4	8,633	1.8	88,566	18.1	35,712	7.3
1958	7,000	1.6	8,000	1.9	80,000	18.8	33,000	7.8
(Est.)								

Year	Exports		Others		Total Of All Usage		1946 as 100 Pct.	
	Tons	Pct.	Tons	Pct.	Tons	Pct.	Tons	Pct.
1946	21,880	4.0	19,328	3.7	541,594	100.0	100.0	100.0
1947	25,848	4.2	42,818	6.9	614,557	100.0	113.5	
1948	25,843	4.6	20,087	3.5	565,839	100.0	104.5	
1949	15,982	3.4	11,860	2.5	473,380	100.0	87.4	
1950	23,009	4.8	2,459	.5	479,670	100.0	88.6	
1951	22,823	4.3	33,899	6.4	525,626	100.0	97.1	
1952	20,957	4.5	26,686	5.7	466,400	100.0	86.1	
1953	19,584	4.3	14,177	3.0	460,559	100.0	85.0	
1954	15,911	4.0	15,130	3.9	394,101	100.0	72.8	
1955	17,185	3.6	34,093	7.2	474,690	100.0	87.6	
1956	20,654	4.1	47,892	9.6	501,404	100.0	92.6	
1957	18,410	3.8	57,932	11.8	489,961	100.0	90.5	
1958	14,000	3.3	39,000	9.2	425,000	100.0	78.5	
(Est.)								

PUBLIC UTILITIES FORTNIGHTLY

Advantages of Extrahigh-voltage Transmission

THIS breakthrough—the high-voltage system—this transmission of greater quantities of electricity over longer distances, has widened the horizon of the electrical industry and is bringing great progress in many ways.

The first 315-kilovolt circuit of American Electric Power Company, the former American Gas & Electric, was placed in service in late 1953 and now its 7-state system is largely interconnected with 345-kilovolt lines.

This provides a power reserve for the fluctuating peaks over this widespread system, and joins the giant new steam electric plants at the eastern and western boundaries of the system—the Carbo plant at mine mouth in Virginia and the Breed plant in Indiana, receiving its coal from a mine some 10 miles distant over a private railroad.

Definitely the trend today is to large electric-generating stations, with big steam turbine generators and improved economies through higher steam pressures and temperatures. Such giant plants are equipped to burn coal, gas, and oil separately or in combination, as may be most economical in effecting ever lower-cost electric energy. An ultramodern plant, now in operation for a year, has reduced the coal consumption to a record low of .67 pounds of coal per kilowatt-hour.

THE conventional practice of the past has been to locate steam power stations near the load centers, frequently remote from the areas of coal supply. High-voltage transmission, however, has provided a new flexibility in power plant location with respect to fuel and water

through the economy and reliability of this long-distance bulk power transmission.

Further, it is becoming more and more difficult and expensive to obtain suitable plant sites near large metropolitan load areas, meaning a land cost differential as between a load area plant and a remote plant. There is also the need to transmit more power over existing rights of way because land for transmission lines is increasingly difficult to obtain.

GENERAL ELECTRIC recently announced an experimental 4½-mile power line to be constructed in New England, designed to carry 750 kilovolts, and perhaps eventually reaching 1,000 kilovolts, which would double present top voltage in the United States, and exceeds any existing line in the world. This is the highest voltage ever transmitted and a demonstration of the feasibility and economy of extrahigh-voltage transmission that will speed the advance of supervoltage low-cost transmission systems carrying more electricity longer distances at reduced cost.

The interchange of electric power in bulk between American Electric and Commonwealth Edison of Chicago over a 90-mile, 345-kilovolt line enables each system to meet its peak demands with 200,000 kilowatts less generating capacity than it could by itself, which means that each company can safely and economically decrease its reserve generating capacity with very large economies in capital and operating costs.

So it is assured that more and more electric power will be transmitted by higher and higher voltage at lower and lower cost as our expanding economy creates ever greater power requirements.

COAL BY WIRE

Fuel Cost

FUEL is the major cost factor in steam power plant operation. Low-cost fuel is therefore the determining factor in the economics of location of the numerous modern steam electric plants now being built and planned. Delivered cost of coal is particularly decisive because of the importance of coal in the total cost of electric energy production. But, of course, coal costs vary according to the distance from coal field.

Continuing improvements in coal mining methods and the opening of new mines in virgin coal reserves susceptible to low-cost highly mechanized mining have stabilized the mine price of coal to the electric utilities through the inflationary years and assure an adequate year-around supply, free of sharp price fluctuations for the long future.

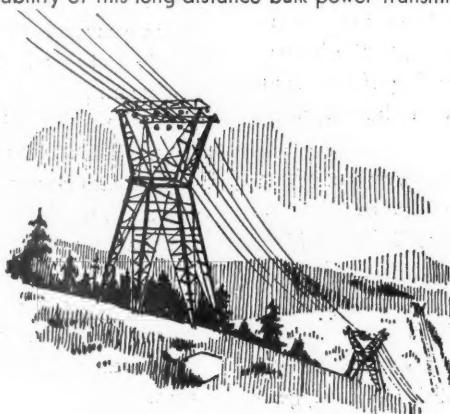
But here it should be noted—and under-

scored—that the cost of rail transportation has steadily advanced, despite the physical modernization of the railroads and other technological improvements. This trend towards ever higher transportation cost has impaired the competitive position of coal in delivered cost.

Actually, the present system of rail freight rates on coal is antiquated. It has been brought forward with little basic change, other than the numerous increases blanketed countrywide, from an earlier era of monopoly; when the present competitive forces in fuel and transportation were nonexistent and the rail coal distribution, though spread very widely, was in comparatively small tonnage lots. And even though a prolonged and deliberate process, a freight rate system bred by monopoly and inflexibility is doomed when it lacks the essential quality of responsiveness to changing conditions and competitive forces.

Importance of High-voltage Transmission

THE conventional practice of the past has been to locate steam power stations near the load centers, frequently remote from the areas of coal supply. High-voltage transmission, however, has provided a new flexibility in power plant location with respect to fuel and water through the economy and reliability of this long-distance bulk power transmission.



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Electric utilities not only seek the lowest cost available fuel—coal, oil, or gas—and even volcanic steam—but they are also in constant search of means of reducing transportation cost, such as by barge, by truck, by pipeline, and by locating the power plant at the coal field when it is determined that it is more economical to transport energy by high-voltage line than hauling coal to a generating plant near the point of consumption.

Water Transportation

LOCATION of steam electric plants on navigable inland waterways provides the twin advantage of ample water supply and low-cost barge transportation.

This trend has snowballed, under the impact of higher rail rates, accompanied by development of riverside mines and mines reaching river ports by short rail or truck haul for transshipment by barge.

The barge movement of coal is usually for a large year-around consumer, but, once established, barge deliveries spread to other industrial and commercial users along the route of water movement.

There is often a two-way barge haul. In Alabama, for example, coal moves by river from the coal fields in the northwestern portion of the state to the industrial Gulf, with return loading of imported ore to the steel industry of the Birmingham district.

Coal is supplied by midwestern mines to the electric public utility of Tampa, Florida, by barge down the Ohio and Mississippi rivers and across the Gulf, with phosphate rock for the Midwest providing a profitable return haul.

And certainly all factors favor east coast Florida electric utilities locating gen-

erating plants on Florida's west coast for the advantage of low-cost water-transported coal, with the electric energy transmitted by high-voltage line to the consuming east coast.

Means of Controlling Cost of Electricity

THERE is an example and a lesson in The Southern Company's impressive record of utilizing every resource and advantage, natural and artificial, including the new instrumentality of extrahigh-voltage transmission, for the best combination to attain the lowest system cost of electricity. This dynamic company serves the Deep South through Alabama Power Company in Alabama, Georgia Power Company in Georgia, Gulf Power Company in northwest Florida, and Mississippi Power Company in east Mississippi. Its exceptionally low-cost electricity in large quantities has been a key factor in the phenomenal industrial expansion of its area.

In the system of The Southern Company there are first the various hydroelectric sources of north and central Alabama and west Georgia, developed and in process of development. Then there are the strategically located steam electric plants in these several states. Leading all in magnitude and low fuel cost is the giant Gorgas steam plant of Alabama Power Company, capacity 711,250 kilowatts, coal consumption 1.6 million tons in 1957. This great steam power plant requires no transportation of the coal because it is astride the coal mine. The present fuel cost is 17.3 cents per million Btu. The Gorgas plant is located on the Warrior river some 35 miles west of Birmingham in the heart of northwest Alabama's heavy industrial area.

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In addition, the system's steam electric plant, now under construction on the Coosa river some 35 miles east of Birmingham, will have an ultimate capacity of 1 million kilowatts and an annual coal consumption of 3 million tons. This plant is in close proximity to Alabama's two major coal fields, Cahaba to the immediate south and Warrior to the near west. It will serve both Alabama and Georgia, employing 230-kilovolt transmission lines.

THE Barry plant of Alabama Power Company near Mobile receives Alabama coal at a transportation cost averaging \$1.22 per ton, in large part by barge at \$1 per ton and in lesser tonnage by rail at \$1.65 per ton, the latter substantially less than the standard rail rate to this area. The Barry plant now consumes 700,000 tons of coal per year. This will increase to 1.1 million tons by midsummer 1959 and to 1.4 million the following year.

The Southern Company's Florida subsidiary—Gulf Power Company—operates a coal-burning plant at Boykin in northwest Florida. Its rail rate on coal is \$2.79, which, incidentally, is \$1.50 less than the standard rate. But the Boykin rate is still \$1.57 higher than the transportation cost to the Barry plant near Mobile, some 150 miles west of Boykin, and a 230-kilovolt transmission line draws on lower cost and

expanding Barry for the growing power requirements of northwest Florida. The lower Chattahoochee river is now navigable and barge transportation of Alabama coal is planned to Boykin at savings of 50 cents per ton under the present rail rate.

Tonnages have been restored to rail coal from natural gas at plants of Georgia Power Company, another of The Southern Company group, by special rail rates as much as \$1.10 less than the standard rates. The Rome, Georgia, plant is served with coal by barge to Guntersville, Alabama, and truck to destination and the barge-truck movement, 800 tons daily over the past five or six years, has been thoroughly dependable. This competition has brought about a rail rate reduction.

STEAM plants of its Mississippi Power Company are fueled under a favorable natural gas contract, but looking ahead in protection against the trend to higher-cost gas, a navigable canal has been dredged to the Gulfport plant to provide barge delivery of coal if and when more economical.

Its Meridian plant can be supplied with Alabama coal by combination barge-truck service at lower transportation cost than the present rail rate.



Q"THIS breakthrough—the high-voltage system—this transmission of greater quantities of electricity over longer distances, has widened the horizon of the electrical industry . . . The first 315-kilovolt circuit of American Electric Power Company, the former American Gas & Electric, was placed in service in late 1953 and now its 7-state system is largely interconnected with 345-kilovolt lines. This provides a power reserve for the fluctuating peaks over this widespread system, and joins the giant new steam electric plants at the eastern and western boundaries of the system—the Carbo plant at mine mouth in Virginia and the Breed plant in Indiana, receiving its coal from a mine some 10 miles distant over a private railroad."

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We conclude this phase of the discussion with TVA, which enjoys relatively low rail rates, responsive to its alert employment of the competing forms of transportation. The end result is a favorable delivered coal cost of 19.4 cents per million Btu for the fiscal year 1957.

TVA's 19.5 million tons of coal in the calendar year 1957 were transported 9.1 million tons by rail; 6.6 million tons joint rail and barge; 2.2 million tons by barge; and 1.6 million tons by truck.

We have illustrated with these southern situations because we know our native area best and because here there are so many potential combinations for lower-cost electricity.

Freight Rate Pattern Evolves

THE foregoing freight rate reductions by the railroads have nearly always been "after the event." Until there is a fait accompli, the railroads have stood pat on their standard but antiquated rate. As a result of this shortsighted policy, coal tonnage has been lost to competition. Belated rail rate reductions have seldom recovered more than part of this lost tonnage.

The haphazard rail rate reductions have been little more than surface movements—a treatment of the symptoms and not the disease—but the combined impact of these experiences over a period of time is apparently now influencing more realism in this field, and particularly on the part of the railroads of the South, which is a natural outcome of the greater intensity of competitive forces in the South.

This new independence in railroad thinking in the South, such as the refusal of the southern railroads to join the rail-

roads of other areas in the more recent blanket coal freight rate increase of 10 cents per ton, can be illustrated even more effectively by freight rate developments in the situation of Duke Power Company, the electric public utility serving the Piedmont area of the Carolinas, an important manufacturing territory of some 20,000 square miles.

IN 1954 Duke planned on construction of a steam electric plant in the Virginia coal field, estimated coal consumption 2 million tons per year, with high-voltage transmission of the energy to the service area. But Duke was induced to abandon the plan by a 35-cent per ton reduction in the rail rate on coal to its several steam electric plants. Subsequently, however, this reduction was wiped out by successive freight rate increases of a national pattern. When this took place, the Southern Railway wisely exercised its individual managerial discretion to join Duke in a new evaluation of the competitive situation looking to reduced but compensatory rail rates to meet competition, and not only hold present coal tonnage by rail but also win increasing future tonnage.

Outgrowth of this study between Duke and the Southern Railway was the recent publication of substantially reduced but compensatory rail rates, and an added reduction of 25 cents per ton as a so-called "volume" rate, applicable to lots of not less than 2,500 tons, the justification being the efficiency and economy of handling such large quantities in single lots.

Unfortunately there has been protest by some of the other railroads and these reduced rates have been suspended for investigation by the Interstate Commerce Commission. While this means delay, the

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principle has been recognized by the Southern Railway and we have every confidence that this enlightened and constructive program will be approved as good business.

Unquestionably, it is in step with the revised rate-making rule of the Transportation Act of 1958, so earnestly sought by the railroads to give them greater freedom in making compensatory and non-discriminatory rates to *attract traffic*.

OBVIOUSLY a large number of cars of coal moving in a block can be transported and delivered more economically than single units since this entails less handling en route and switching service is simplified.

So that in the South the railroads now have an awareness that lower but compensatory freight rates must be determined quickly and intelligently and offered willingly in this field as both a business holder and a business getter. This will unlock rich coal reserves served ex-

clusively by railroads and now barred from the electric utility market by high-cost transportation.

IN brief, a rail freight rate pattern is clearly evolving towards sound economics in steam electric plant location and substantial participation by the railroads in this vast and enormously expanding coal requirement primed by the great power growth of the electric utility industry. This new rate pattern, molded by developments of this modern age, will redound to the benefit of all—the consuming area and its people, the electric public utilities, and the railroads.

But, as past experience has so clearly demonstrated, time is of the essence. Electric public utility expansion is moving fast. When plant locations are fixed, when other means of energy transmission or coal transportation are adopted, with enormous investments in facilities of thirty years' life, coal tonnage of the railroads will be irrevocably lost.

"A REGION-BY-REGION examination would show, I am sure, that the congressional and gubernatorial elections were more rebellious than revolutionary....

"Look where you will, there is anger, there is annoyance, there is petulance and impatience.... Where is any revolution?

"Rebellion, yes. Rebellion is the act of disobedience and defiance.... The nation's mind for a long while has been a woman's mind, ably described by Sir Walter Scott—'uncertain, coy, and hard to please.'....

"Rebellion is a fiery thing, a passionate spirit, which demands an intellectual master. It is like inspiration which, with the guidance of the intellect, becomes a work of art. The need in America is not for more compromisers and straddlers, much less for more glamour and sloganizing. The need is for somebody—let's hope he is a member of the 86th Congress—with the brains to take this runaway rebellion and turn it into a constructive revolution."

—HOLMES ALEXANDER,
Columnist.

A State Commission Quiz on *Depreciation Practices*



By MYRON H. ROSS*

A survey of state commissions does not disclose any clear-cut economic principle that works to determine capital costs. But some constructive depreciation considerations are pointed up that, if followed, should prove helpful guideposts in determining depreciation policy.

BECAUSE depreciation is important in determining the amount of return on capital a public utility receives, this writer endeavored to develop a little more systematic information regarding depreciation practices. What were the views of the regulators on various aspects of that treatment of depreciation at the state level?

A certain amount of definite data was on record, of course, in the form of decided and reported cases. But a good part was not on record, especially on points which might not arise in such a form

as to be an issue to be specifically determined in a contested case.

A questionnaire was therefore sent by this writer December, 1957, to the forty-eight state public utility commissions in order to determine current depreciation practices. Forty-one replies were received. This questionnaire¹ with a summary of the replies is the basis for this article. The text of the questionnaire is appended, and the references in the following text are keyed to the respective questions by number.

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¹The writer wishes to express his thanks to A. R. Colbert, chief of the accounts and finance department of the public service commission of Wisconsin, for his many helpful suggestions in formulating the questionnaire.

A STATE COMMISSION QUIZ ON DEPRECIATION PRACTICES

Question I. Depreciation Methods

ALL commissions indicated practically without qualification that original cost was the base used for depreciating fixed assets (Ia), with the allocation being on a straight-line (Ib), or equal installment, method spread over the estimated life span of the depreciable property. Only a small minority felt that it would be feasible to adjust the depreciation base for changes in the price level (Id). Comments to Id often indicated that depreciation was on an original cost base and, in the words of one commission, "the problem does not arise."

Utility capital is characterized by long life. This might be viewed as making original cost a poor index of present capital cost, especially when changes in the price level are significant. The nonregulated industries generally use present capital cost, whereas public utilities are more often required to use original cost in the formulation of price. Even if the nonregulated sector used original cost, prices would still differ because of different methods of depreciating. Only 36 per cent of the concerns in the capital goods industry use straight-line depreciation according to a recent survey.

A number of commissions felt that since new capital is depreciated at current prices "it automatically takes care of changes in the price level." This would be true only in the case where *all* capital were purchased in the present period. Since capital is only partially replaced during any accounting period, some weight is given to past capital costs when original cost is adhered to. Original costs probably have greater weight in the railroad industry than in the electric power industry

because of the slower expansion of the former.

A FEW commission replies indicated that a reproduction cost base was preferable as an ideal, but unattainable in practice. Contrary to this, it has been argued by critics of the strictly cost base that an index of capital values similar to that developed for railroad equipment by the Interstate Commerce Commission would be practical. While original cost is often defended as "objective" (whatever that means), it may lack practical significance, and an approximation of reproduction costs may be a more accurate reflection of present value. The fact that index numbers are not perfect should not preclude their use in the public utility field. The limitations of index numbers have not prevented their practical application in the fields of agriculture and labor. Furthermore, the use of index numbers, despite their imperfections, reduces significantly the need for prolonged engineering studies.

Present capital costs, if employed by public utilities, would become a common denominator between the regulated and the nonregulated firms. It is at least inconsistent for a utility to base some costs, such as labor, on current prices, and capital costs on past prices, while expecting to achieve a meaningful total cost figure.

Some recent court decisions tend to agree with the above. Thus, the Iowa supreme court² has indicated that "allowance for depreciation as an operating expense should be based upon present value rather than original cost." The pragmatic "end result" theory of the Hope case does

² Iowa-Illinois Gas & E. Co. v. City of Fort Dodge (1957) 20 PUR3d 159.

not nullify the principle of a fair return on fair value. Both the regulatory commissions and the courts are at liberty to regard cost of production as one test of the "end result."

Question II. Tax Depreciation

No national pattern is apparent regarding accelerated amortization (IIa). From the comments made, it appears that accelerated amortization has had little actual effect on utility prices, so far.

Question III. Unit-of-output Depreciation

Few commissions have information regarding unit of output as a measure of depreciation of specific plant or equipment (IIIa). Even in those cases where it would be a measure of the use of property it is not employed (IIIb). Nevertheless, a large minority of commissions felt that such depreciation might be feasible (IIIc).

Most commissions indicated that they give above or under average use of property consideration in computing depreciation (IIId). Yet it appears that most do not consider extremes in the use of a hydro plant (IIIe) or a prolonged period of idleness for a steam plant (IIIIf) as significant. The position of the commissions is summarized by the following comment to IIIc:

It would be possible to base depreciation of certain classes of plant on units of output, but use of straight-line methods, based on a fixed period of time, applied to all classes is considered a better measure of depreciation. One may say that unit-of-output depreciation is thought to be feasible in general for generating and automotive equipment, but that it is seldom employed.

Why is straight-line "a better measure of depreciation"? And, since generating and automotive equipment is a significant portion of public utility capital, why have the public utilities not made greater use of the unit-of-output method? Would not unit-of-output depreciation, where practical, give a better measure of user cost than straight-line depreciation?

User cost might be viewed as the difference between the expected value, say, of a truck when it is not used and the expected value of the truck when it is used. Understanding and utilization by the commissions of this concept could result in improved practices. In the simplest case, where obsolescence and maintenance are nonexistent, there is no user cost if the truck is not used. User cost will generally vary directly, though not necessarily proportionately, with use.



Q"WEAR and tear from use . . . almost always shorten the **physical** life of capital; they do not necessarily shorten the **economic** life. Since utilities usually enjoy a local service area monopoly position, and are thus in a position to forestall major obsolescence, wear and tear from use become more significant. It is somewhat surprising, therefore, that utilities generally do not avail themselves of the unit-of-output method to a greater extent—similar to the Canadian Pacific Railway's annual depreciation charge, which is on a 'user basis,' with depreciation varying in relation to use."

A STATE COMMISSION QUIZ ON DEPRECIATION PRACTICES

With a zero rate of obsolescence, as perhaps with an electric generator, all depreciation from use is part of cost. One commission, in remarking that "telephone utilities use engineering estimates of life," probably had the case of a zero rate of obsolescence in mind. Here the physical and economic life estimates coincide. At the other extreme, where there is a significant rate of obsolescence, as with the auto die, wear and tear from use need not result in additional cost. Additional use of the die may reduce its physical life from ten to eight years, but this would have no economic significance, since obsolescence sets a limit of about two years to the life of the die. Wear and tear from use thus almost always shorten the *physical* life of capital; they do not necessarily shorten the *economic* life.

Since utilities usually enjoy a local service area monopoly position, and are thus in a position to forestall major obsolescence, wear and tear from use become more significant. It is somewhat surprising, therefore, that utilities generally do not avail themselves of the unit-of-output method to a greater extent—similar to the Canadian Pacific Railway's annual depreciation charge, which is on a "user basis," with depreciation varying in relation to use.

Question IV. Maintenance

MAINTENANCE is generally written off as a current expense (IVa). Apparently many commissions think in terms of an absolute and unique level of maintenance for each type of equipment (IVb). Despite the common recognition of amortizing unusual maintenance resulting from "acts of God," there is little

recognition of any functional relationship between the life span of capital and the level of maintenance. With the exception of the California method, where annual revision is made for changes in the life of capital, this factor of maintenance-to-capital relation appears to be in need of general attention and consideration. Additional maintenance will ordinarily lengthen the life of equipment. Thus the depreciation period might well vary with the level of maintenance.

Since replacement is the inverse of the depreciation period (all other things equal, the greater the depreciation period the less replacement necessary), the term replacement could be substituted for the depreciation period. This maintenance-replacement relationship may be illustrated on a chart. If the utility desires to keep its net worth unchanged (a zero rate of investment), it will have to choose the optimum "maintenance-replacement" combination. Furthermore, if net worth is to remain unchanged, reduced maintenance would indicate an increase in the replacement of capital. In fact, the utility may have a schedule of various "maintenance-replacement" combinations which will keep net worth unchanged. This may be represented by a curve which could be called the "no investment" curve.

IF a utility company desires to increase net worth through additional investment, another curve could be placed above the "no investment" curve. This alternative "investment" curve would show the results of *more* maintenance and replacement. Conversely, in theory at least, if the utility desired to decrease its net worth (that is, to liquidate or retire investment)

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this could be shown by another curve placed below the "no investment" curve, and would show the results of *less* maintenance and replacement. Thus each curve would represent a series of combinations which maintain a given level of net worth. This would demonstrate the fact that replacement (e.g., the depreciation period) varies with the level of maintenance.

IN this writer's opinion, the best choice is the combination which, for a given expenditure, maximizes the utility's net worth. In other words, the price ratio of maintenance and replacement will equal their marginal rate of substitution. By holding, say, the price of maintenance

fixed, a demand curve for replacement may be derived. Since maintenance involves mostly labor, while replacement involves mostly capital, the problem is one of determining the optimum life span of capital.

From the comments received from regulatory sources, it appears the commissions feel that there is little substitution of the two factors. Thus the view is taken that variation in relative prices will have no effect on the choice to be made. But this position is not always defensible, and, perhaps, is the result of confusing engineering with economic concepts. Phrases such as "the proper level of repairs" and "normal maintenance" recur in the com-

2

Reproduction Cost Base Preferable, but . . .

"A FEW commission replies indicated that a reproduction cost base was preferable as an ideal, but unattainable in practice. Contrary to this, it has been argued by critics of the strictly cost base that an index of capital values similar to that developed for railroad equipment by the Interstate Commerce Commission would be practical. While original cost is often defended as 'objective' (whatever that means), it may lack practical significance, and an approximation of reproduction costs may be a more accurate reflection of present value. The fact that index numbers are not perfect should not preclude their use in the public utility field."



A STATE COMMISSION QUIZ ON DEPRECIATION PRACTICES

ments found in the replies to this writer, with little suggestion that maintenance may be a variable rather than a specific factor of operation. In fact the period of depreciation may be regarded as indeterminate without knowledge of maintenance policy.

Question V. Salvage and Cost of Removal

MOST commissions take salvage and cost of removal of plant into account in setting depreciation rates (Va and Vb).

Question VI. Obsolescence

OBSOLESCENCE is taken into consideration in practically all cases (VIa), but the responses to IVb were uncertain. Typical is the comment that ". . . this is a judgment process based on all relevant information including past experience, progress in the arts, and future requirements." Most commissions felt that there was no systematic bias in either over- or underestimating depreciation. Thus it was felt by many that nothing need be done if either under- or overestimation in individual cases (VIId) should occur.

Question VII. Control of Practices

MOST commissions certify depreciation rates (VIIa), correlating closely with the number which conducts periodic research into the service life of equipment (VIIb). Some indicated that they would like to study depreciation practices more thoroughly, but that funds were limited.

Question VIII. Replacement of Assets

MOST felt that depreciation charges during 1947-57 were inadequate to

replace the identical item (VIIa). Practically all comments cited the higher price level. Some felt constrained to repeat ". . . the basic purpose of depreciation is to recover dollars of original investment and not to replace it."

Apparently the increased efficiency of utility plant has more than compensated for the increase in the price level (VIIb). Since prices have increased by about 25 per cent during the 1947-57 period, one may say that output has increased by more than 25 per cent.

Conclusion

IN this writer's opinion, there appears no clear economic principle at work in determining capital costs. Opportunity or user costs, or the factors that determine these costs, are given insufficient attention. Too much attention seems to be given to the accounting and engineering points of view.

From a general point of view, the fact that prices are determined differently in the regulated and the nonregulated sectors may tend to destabilize the economy. Lower relative prices in prosperity may stimulate the consumption of utility services; furthermore, the marginal efficiency of concerns in the nonregulated sector may be increased, thus stimulating investment. The opposite case may be true during a period of depression. A further instance of this differentiation in pricing techniques can be seen with accelerated amortization. If accelerated amortization has an influence on supply in the nonregulated sector (and it probably does), then it tends to decrease nonregulated prices relative to utility prices, since accelerated depreciation does not affect the latter's prices.

Briefly, some constructive suggestions may be offered: (1) Less reliance could be placed on straight-line depreciation and more on unit-of-output depreciation. (2) Recognition might well be given to the fact that depreciation in constant dollars is more meaningful than one with a fluctuating price level. (3) Maintenance, when of the capital expenditure type, should be amortized. (4) Finally, the impact of changes in maintenance policy on the depreciation period should be given increased attention.

Summary of Replies to Questionnaire on Depreciation Practices

Ia. For rate-making purposes does the amount of depreciation on utility plant included in operating expenses provide for the recovery of

- 41 (a) Original cost of utility plant.
- 0 (b) Reproduction value of utility plant.

Ib. Which of the following depreciation methods is generally used by utilities under your jurisdiction in determining depreciation expense for rate-making purposes?

- 41 (a) Straight-line.
- 0 (b) Sinking fund.
- 0 (c) Sum-of-years digits.
- 0 (d) Declining balance.
- 0 (e) Unit of output.



THE commissions were asked, "Would it be feasible to base depreciation of utility plant on estimated units of output rather than a fixed period of time?" Ten answered **yes** and twenty-nine **no**. Summarizing their viewpoint is this comment: "It would be possible to base depreciation of certain classes of plant on units of output, but use of straight-line methods, based on a fixed period of time, applied to all classes is considered a better measure of depreciation. One may say that unit-of-output depreciation is thought to be feasible in general for generating and automotive equipment, but that it is seldom employed."

A STATE COMMISSION QUIZ ON DEPRECIATION PRACTICES

sired, be measured in units of output rather than a period of time?

8 (a) Yes.
31 (b) No.

IIIb. Is depreciation allowed for rate-making purposes related to units of output in instances where this would be a measure of the use of property?

5 (a) Yes.
35 (b) No.

IIIc. Would it be feasible to base depreciation of utility plant on estimated units of output rather than a fixed period of time?

10 (a) Yes.
29 (b) No.

IIId. Is the effect of abnormal use of plant given consideration in estimating the life of plant?

26 (a) Yes.
14 (b) No.

IIIe. In computing depreciation for book purposes would a utility adjust depreciation charges for a situation such as follows: Depreciation on a hydro plant during a year of higher or lower than normal water level?

5 (a) Yes.
25 (b) No.

IIIf. In computing depreciation for book purposes would a utility adjust depreciation charges for a situation such as follows: depreciation on a steam plant during a six-month period on which generators were being rebuilt?

7 (a) Yes.
30 (b) No.

IVa. How are maintenance expenses handled?

29 (a) All maintenance charged to current operating expenses.
11 (b) All major expenditures which materially affect the value of utility plant are amortized.
1 (c) Other (explain under remarks).

IVb. Does a change in the level of repairs have any effect on the estimated life of plant and equipment for depreciation purposes?

22 (a) Yes.
17 (b) No.

Va. Is cost of removal of utility plant considered in determining depreciation rates?

39 (a) Yes.
2 (b) No.

Vb. For rate-making purposes is the salvage value of utility plant a factor in the determination of depreciation rates used in calculating depreciation?

39 (a) Yes.
2 (b) No.

Vc. If the answer to Vb is "yes," indicate the basis on which salvage value is calculated.

11 (a) Historical salvage experience.
1 (b) Current salvage value.
20 (c) Estimated salvage value at probable date of retirement.

VIa. In determining depreciation for rate-making purposes is the factor of obsolescence taken into consideration?

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38 (a) Yes.
3 (b) No.

VIb. If the answer to VIa is "yes" how are estimates made?

21 (a) On the basis of past experience.
0 (b) On the basis of estimates of the firm manufacturing the plant or equipment.
16 (c) Other (indicate under remarks).

VIc. If the answer to VIa is "no" what adjustment is made if plant becomes obsolete before it is fully depreciated?

1 (a) Make an additional charge to current expense.
3 (b) Nothing, since some plant will be used for a period longer than estimated life.
0 (c) Nothing, this being a risk which the utility must bear.

VID. What action is taken for rate-making purposes if the estimated useful life of the equipment is less than the actual life of the equipment?

7 (a) Additional depreciation charges will be made and be considered part of current costs.
18 (b) Nothing, since inadequate depreciation of some assets will be offset by excessive depreciation of other assets.

9 (c) Other (indicate under remarks).

VIIA. Are depreciation rates for utilities certified by your commission?

28 (a) Yes.
18 (b) No.

VIIb. Are periodic depreciation studies made to determine the estimated life of equipment and plant?

27 (a) Yes.
14 (b) No.

VIIIa. On the average have depreciation charges for individual items of plant been sufficient to *replace the individual item* during 1947-57? (Specify reasons under remarks.)

3 (a) Yes.
36 (b) No.

VIIIb. In cases where new plant differs significantly from old plant, on the average, how has the expenditure for new plant of an amount equal to accumulated depreciation on old plant affected output during 1947-57?

11 (a) Increased output.
3 (b) Decreased output.
2 (c) No change in output.

"**W**HATEVER may be done about a tax cut in the next few months it is significant that all shades of economic and political opinion have seemed to come together on one proposition. That is, that taxes are too high and that they are a burden on the economy from which it must sooner or later be freed."

—WILLIAM H. GRIMES,
Contributing Editor, The Wall Street Journal.

Producer and Gas Pipeline Yardsticks

By ARTHUR K. LEE*
CHAIRMAN OF THE BOARD, UNITED CITIES GAS COMPANY



The Natural Gas Act requires a thorough revision in order to fit it to cope with today's conditions. To protect the consumer from unreasonable increases in gas costs, some reliable yardstick should be devised so that the commission can measure what is a fair and reasonable return upon a producer's investment. Involved two-part and similar rates by pipelines should be prohibited where they cause residential gas consumers to pay more than twice as much as is paid for gas for interruptible use. And direct sales by pipelines should be placed under the jurisdiction of the Federal Power Commission.

WHEN the Natural Gas Act was passed in 1938 for the protection of the consumers of natural gas, there was a large oversupply of gas in present producing states. The company which could build or control a pipeline was in the driver's seat and the pipelines were few and short. The Natural Gas Act, with its promise of consumer protection, provided the market which made possible the financing and building of the present interstate pipelines.

*For additional personal note, see "Pages with the Editors."

Because of the continued abundance of supply, field prices were fixed chiefly by competition between producers and little attempt was made by the Federal Power Commission to control field prices until the Supreme Court on June 7, 1954, decided that Congress, in its desire to fairly and reasonably protect the consumer, intended the commission to control prices paid by interstate pipelines for gas purchased. As practically all exploratory (wildcat) wells have been and now are drilled in a search for oil, the major gas

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supply is now in the hands of large oil companies. The fourteen largest gas producers of 1957, according to a Federal Power Commission release, were all large oil companies, and as leading oil companies of the country from 1947 to 1957 averaged returns between 13.6 and 22.7 per cent after taxes, there must have been some fairly reasonable profit on gas production even before 1954, or these companies would not have continued accumulation of these large gas reserves.

PRECEDING the Phillips decision the natural gas division of the FPC exercised price-fixing jurisdiction over interstate pipelines only. Although in 1957 over 80 per cent of gas passing through interstate lines was furnished by only 82 producers, the entire number of persons having production interests runs into the thousands, and to consider each one individually is an impossible task for the commission. At first large producers refused to furnish figures showing their costs, claiming that production of oil and gas was so intermingled that it was not possible to segregate costs between the two products. When the courts decided that cost data are an essential of first consideration in a producer rate case, these large producers found they could segregate costs, but of course are contending for the largest possible allocation thereof to the price-controlled product (gas).

Seven rate investigations of large producers have been in progress, some of them since 1955, without a decision in any one of the seven up to January 1, 1959. As Commissioner Arthur Kline said September 16, 1958, in an address before the Independent Natural Gas Association convention, the commission has thus far

been unable to devise a formula for dealing with the problem. He further stated:

The records of the Federal Power Commission show that between June 7, 1954, and July 1, 1958, the commission has suspended a total of 1,463 producer rate filings. Of this number, we had disposed of only 132, less than 10 per cent, leaving pending and undecided as of July 1st, 1,331 suspension cases . . . and the number of pending cases is now increasing at the rate of approximately 50 a month. . . . Rate filings which remain suspended for long periods create problems for everyone involved.

As of November 30, 1958, the number of producer rate suspensions had risen to 1,830, involving an annual amount of \$81,988,693. Evidently the Natural Gas Act is afflicted with either decisional paralysis or legislative deficiency.

When a commission which has been geared to regulating 37 (June, 1957) major pipelines is suddenly ordered to regulate a few large and thousands of small producers, it must be expected that chaos will result, if it cannot arrive at a governing formula or yardstick.

BEFORE the Phillips decision two attempts were made to put legislation on the books to prevent further producer regulation. In 1955 and again in 1957 Representative Harris introduced bills which, to all intents, would accomplish decontrol. Neither became law. He has again introduced his 1957 bill with some amendments, which are aimed to stop underpricing of a portion of the direct sale of gas by pipelines, seemingly with the hope of obtaining the support of the coal interests.

PRODUCER AND GAS PIPELINE YARDSTICKS

Who Needs Congressional Help?

OPPONENTS of producer decontrol have thus won four battles but have lost the war. Here is why I make that statement:

There are five segments interested in natural gas:

1. Producing companies, 82 of which furnished over 80 per cent of gas sold in interstate commerce in 1957.

2. Pipeline companies, about 37 in number, 25 of which transported over 90 per cent of gas marketed through pipelines.

3. Distributing companies, which hold franchises in one or more cities and towns, 29 of which sell over 60 per cent of all resale gas.

4. Several thousand ultimate consumers (consumers purchasing direct from pipelines). These sales are free from commission jurisdiction, and their sale revenues are not taken into account in determining rates to distributors, thus putting profits into the pipelines' coffers exceeding the fair and reasonable return contemplated.

5. Twenty-four million nine hundred two thousand residential, 2 million commercial, and 144,000 industrial consumers.

With the above concentration of control, I leave it to you as to who needs real representation by Congress.

Gas Prices Have Risen Sharply

THE average field price of natural gas between 1946 and 1950 was 6.2 cents per Mcf. By 1956 it had risen to 10.8 cents.

But in the summer of 1957 the commission issued a certificate to Tennessee Gas Transmission Company to build a pipeline several miles into the Gulf of Mexico to purchase an estimated 1.6 billion to 6 billion Mcf from five large oil companies, whose initials, Catco, were used to designate the transaction (largest in gas history) at 22.4 cents per Mcf, with two-cent increases each four years thereafter. Tennessee Gas Transmission said it had to have this gas for present and prospective customers. The Catco companies advised the commission that unless the contract was approved at the 22.4-cent price, they would seek an intrastate sale. Additional intrastate market for any large quantity of gas is, of course, nonexistent. From 1951 to 1957, while this threat was being repeated over and over, and presumably effort was being made to find a market, the increase in intrastate sales, after deducting gas used in the field, was only 255 million Mcf as against an increase of 2,808,708,000 Mcf in interstate shipments. These are Bureau of Mines figures.

Their bluff worked because the majority of the commission (Connole dissent-

Q"REAL competition with other fuels would go far to reduce field prices [of gas] but the competitive battlefield must be in the sale of interruptible industrial gas, because residential consumers are unwilling to deprive themselves of home gas luxury or lose their large appliance investment and as long as pipelines are not forced to include real costs in their industrial sale prices, there will continue to be no real competition. The unrestrained use of gas for boiler fuel and especially electric generation, at low prices, is to a large extent the real reason for constantly increasing field demand and higher prices."

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ing) felt the law gave the commission no power to suspend initial prices or condition the certificate authorizing the sale.

THAT was the first big breakthrough, June 24, 1957. The median price of initial or threshold contracts approved in 1957 and up to May, 1958, was 20 cents, plus tax reimbursement. To quote a witness at a commission hearing, Robert W. Chapin, each new increase "became the springboard for a new upward leap whenever the combination of a hungry pipeline and a seller's market presented itself." Nearly every new increase triggers via escalation, contract increased prices of far larger quantities of gas delivered under old contracts. Between 1946 and 1957 all gas at the burner tip has cost consistently four and one-half to five times and residential gas seven times field price.

And the commission has seemingly, without a real tryout in a major case, come to believe that rates need bear little relation to costs and that the measure of price is a claim of arm's-length dealing plus fairly comparable market prices in comparable locations, which are constantly increasing as any one producer succeeds in getting an increased price from a gas-hungry pipeline.

Is not that practically what Mr. Harris has been trying to make law for the past four years?

The Remedy

A CONSIDERABLE revision of the Natural Gas Act is in order to fit it to today's conditions. A committee with producing and consumer-state representation might be in order for this purpose. But such action might take time and if the

residential consumer is to be protected from unconscionable increases, action upon three fronts at least is necessary.

These three are:

1. A method, formula, plan, or whatever you may wish to call it, to provide a cost yardstick for the commission's measurement of an approximate "fair and reasonable" return upon producer's investment.

2. A prohibition against the use of involved two-part and similar rates by pipelines in a way to cause residential gas consumers to pay more than twice as much for transporting residential gas as is paid for gas for interruptible use.

3. Placing direct sales by pipelines under the jurisdiction of the Federal Power Commission, and providing that such sales shall contribute their full share of expense and return.

No. 3, it seems to me, is axiomatic. I can see no reason why pipelines should retain the profits from these direct sales, when they are being allowed a full "fair and reasonable" return from their sales to distributors.

As a possible workable solution for No. 1 and No. 2, may I present the following?

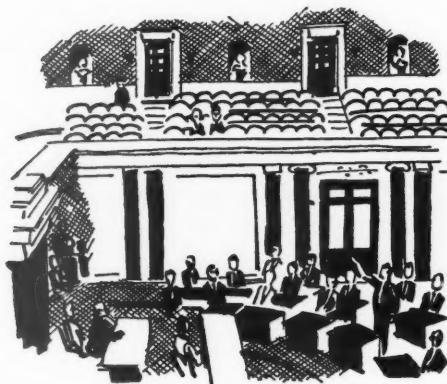
No. 1. Let Congress direct the Federal Power Commission to:

(a) Divide interstate gas-producing areas into large districts where similar conditions with reference to production exist. Ten or fifteen districts should probably be a maximum, at least at this time.

(b) Compute a weighted average of

PRODUCER AND GAS PIPELINE YARDSTICKS

Federal Power Commission Desks Could Be Cleared



"IN HR 366, introduced January 7, 1959, Mr. Harris has added amendments to his 1957 bill, seemingly with the intention of limiting direct sales of low-priced 'off-peak' gas only. While I continue to oppose the Harris Bill because I feel no satisfactory control of field prices can be enacted without basic consideration of the cost element, I believe his amendments to § 4, if changed to apply to all interstate gas shipments and enacted concurrently with a field price formula . . . Federal Power Commission desks could be cleared of other than current cases, and producers, pipelines, distributors, and consumers would have a reasonable road guide for future operations."

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prices paid for interstate sales of gas in each district during a year, perhaps 1956, before the big increase started and a semblance of competition still existed, to that average add the Btu or percentage increase in market prices of all competing fuels, coal, oil, and hydroelectricity, since that time, as nearly as may be, and use that result as a yardstick, with a recomputation at the end of each year. Any application or contract with price equal or less than such price in its district could receive automatic approval. Any applicant for a greater price could accept the yardstick price with assurance that when applicant proved to the satisfaction of the commission that

he was entitled to a greater price on a "fair and reasonable" return basis, such greater price would be approved. Under these conditions he could probably expect approval within a very reasonable time.¹

The Natural Gas Act should be amended in a manner to show that there is no doubt this same rule will apply to both independent and pipeline-owned gas and to initial and temporary approvals.

¹ For detailed description of similar suggestions, please see article by the Honorable William R. Connole, Federal Power Commissioner, in *PUBLIC UTILITIES FORTNIGHTLY* of January 1, 1959, page 23, and another by Charles H. Frazier of United Gas Improvement Company of Philadelphia, in the October 23, 1958, issue of the same magazine, page 616.

No. 2 presents a problem, the suggested solution of which may not be approved by most of the large companies operating in the first four segments of the gas industry mentioned above. It will, however, reduce residential consumer charges in both cities and towns.

I HAVE told you of the Catco contract, for which, at a 22.4-cent price Tennessee Gas Transmission pressed the Federal Power Commission for approval because, it said, it had to have the gas for present and prospective customers. On December 17, 1958, the first hearing was held on TGT's application to spend \$61 million to increase the capacity of its line to Portland, Tennessee, in order to deliver to a subsidiary, Midwestern Gas Transmission, 363,000 Mcf of gas per day. Midwestern will also invest \$50 million in building a line from Portland, Tennessee, to Joliet, Illinois, where it will sell 360,000 Mcf per day to the three distributors serving the Chicago-Gary area.

This gas is to be sold on a two-part rate:

For Commodity	22¢ per Mcf
For Demand	\$4.00 "

"Demand" as used in pipeline rates, means a monthly charge for the highest daily number of Mcf used, usually in the preceding year. In this case it would add approximately $(\$4.00 + 30)$ 13 cents per Mcf for a 100 per cent load factor (equal use each day if equal to highest use as above):

360,000 Mcf daily = 129,600,000 Mcf annually
 $@ 35¢ = \$45,360,000$

This gas is, of course, a mixture of all gas being purchased in Texas, Louisiana, and the Gulf by TGT. Its average purchase price in 1957 was around 13 cents.

It may be as high as 16 cents or more today, including tax. But TGT said to the commission when the Catco contract was approved that it must have the Catco gas to supply its present customers and growth.

Midwestern is a new line so it seems necessary to appraise this Chicago gas for accounting purposes as being part of the Catco purchase.

Therefore, the cost should be charged at 22.4 cents. If it is charged at the average price, the pipelines' present consumers from Tennessee to New England must, in increased charges, bear the difference:

129,600,000 Mcf @ 22.4¢	=\$29,030,400
Difference between cost and sale (spread)	=\$16,329,600

Now we consider who pays this \$16 million (or \$8 million more if you prefer to use the average cost price of 16 cents). It would appear to the average consumer that as the gas is sold to three large distributing companies, they could distribute the costs on an equitable basis. But that is not the way it works. They know they must sell many of their industrial customers at a low price in order to compete with other fuels, so they sell this gas at only slightly more than the pipeline "commodity" charge, because as so sold it does not increase their "demand" payment. As a result the pipeline receives only the commodity charge for a large portion of its gas. For the country as a whole about 40 per cent of interstate shipments are sold to direct customers, mostly interruptible, and to distributors for interruptible use, 20 per cent for commercial and firm industrial consumers, and 40 per cent for residential consumers. On this approximate gas allocation, TGT and

PRODUCER AND GAS PIPELINE YARDSTICKS

TABLE 1

			Revenue	Cost	Pipeline Profit	
					Per Mcf.	
Interruptible	51,840,000	Mcf. @ 22¢	\$11,404,800	\$11,612,160*	\$ (207,360)	\$(0.004)
Com'l & Firm Ind'l.	25,920,000	" @ 35¢	9,072,000	5,806,080	3,265,920	0.126
Residential	51,840,000	" @ 48¢	24,883,200	11,612,160	13,271,040	0.256
Totals	129,600,000	"	\$45,360,000	\$29,030,400	\$16,329,600	\$ 0.126

* Louisiana now has an additional one-cent tax.



its subsidiary will receive their payments by class of service as shown in table above.

This line when completed will pass near many small towns between Portland, Tennessee, and Joliet, Illinois. Many of these towns will desire to obtain natural gas service and one of the purposes of the Natural Gas Act was to prevent discrimination. But these small towns, with little or no opportunity to sell gas to industry, must, in addition to the 22.4-cent field cost, pay a pipeline charge of 25 cents per Mcf for all its gas instead of having 40 per cent of it transported for a fraction of that amount (less than nothing in above case, which I admit is highest of which I am aware, but is a fair example of what we can expect in the next few years if present methods continue).

PPIPELINES, producers, and distributors with large industrial outlets will contend that I am unfair in assigning the Catco or other high-priced gas to this Chicago line. In the latest of three recent rate increases applied for by TGT, it is asking for 3.2 cents per Mcf because of increased

field price costs. If its present rate is based on a 16-cent average, an early 22-cent average cost is indicated.

However, let us make a comparison of the pipeline charges which result if we figure the gas for the Chicago project at an average field cost of only 16 cents per Mcf. (See Table 2 below.)

Because of the seasonal nature of the residential load, it should pay a somewhat higher transmission charge than interruptible gas, but it is manifestly unfair that residential users should be forced to pay pipeline charges up to five times as great.

Harris Bill HR 366

IN HR 366, introduced January 7, 1959, Mr. Harris has added amendments to his 1957 bill, seemingly with the intention of limiting direct sales of low-priced "off-peak" gas only. While I continue to oppose the Harris Bill because I feel no satisfactory control of field prices can be enacted without basic consideration of the cost element, I believe his amendments to § 4, if changed to apply to all interstate



TABLE 2

			Revenue	Cost	Pipeline Profit	
					Per Mcf	
Interruptible	51,840,000	Mcf. @ 22¢	\$11,404,800	\$ 8,294,400	\$ 3,110,400	\$ 0.06
Com'l & Firm Ind'l.	25,920,000	" @ 35¢	9,072,000	4,147,200	4,924,800	0.19
Residential	51,840,000	" @ 48¢	24,883,200	8,294,400	16,588,800	0.32
Totals	129,600,000	"	\$45,360,000	\$20,736,000	\$24,624,000	\$ 0.19

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gas shipments and enacted concurrently with a field price formula, that suggested under No. 1 herein or some other, Federal Power Commission desks could be cleared of other than current cases, and producers, pipelines, distributors, and consumers would have a reasonable road guide for future operations.

My suggested wording, following the wording of Harris amendment, is:

From and after 120 days from the effective date of this subsection, no natural gas company which makes sales of natural gas subject to the jurisdiction of the commission shall, except as provided in subsection (g) (of Harris Bill conformed) of this section, make in any of its rate zones, any sale in interstate commerce of natural gas—at a commodity rate lower than 85 per cent of the price it currently realizes from both demand and commodity charges for 100 per cent load-factor sales under its lowest two-part rate in the same rate zone.

If such natural gas company does not have in effect in such zone a two-part rate consisting of a commodity rate and a demand rate, it shall make no sale at a rate lower than 85 per cent of the average rate per unit realized by such natural gas company, during the calendar year next preceding each year in which deliveries of such natural gas are made, from its rates in effect during such next preceding calendar year, from the sale in interstate commerce of natural gas for resale to all persons who purchased natural gas from such natural gas company in such zone and resold all or a part thereof to domestic consumers.

Eighty-five per cent of median rate price would allow highest rates 115 per cent of such median price and as this differential applies to sale price which includes cost, it would mean an allowed differential in pipeline charges of 60 per cent or more.

This Method Has Possibilities

ANOTHER solution would be to direct the commission to fix pipeline rates under which no unit of gas would pay less than the average field price being paid by the pipeline in that or a preceding year plus (one-half?) of all other pipeline expenses to produce a "fair and reasonable" return. Under this suggestion the pipeline profit in Table 1 would be approximately 8 cents and 16 cents per Mcf for interruptible industrial and residential use, respectively, and 11 cents and 22 cents in Table 2.

These increases in the pipeline charge for interruptible gas might result in a loss of half that business, consisting chiefly of inferior uses which should be replaced by other fuels in order to conserve future gas supply for the superior use of 27 million domestic, commercial, and firm industrial users, and to reduce the field demand, without which pipelines would not need to yield to 75 per cent take or pay provisions by producers. The producers' insistence upon these provisions is a principal reason why pipelines are forced to transport interruptible gas at less than properly applied costs. But loss of half the interruptible business would result in no less pipeline net revenue because of increase in the other half.

Real competition with other fuels would go far to reduce field prices but the competitive battlefield must be in the sale

PRODUCER AND GAS PIPELINE YARDSTICKS



Increasing Field Prices for Gas

"THE average field price of natural gas between 1946 and 1950 was 6.2 cents per Mcf. By 1956 it had risen to 10.8 cents. But in the summer of 1957 the commission issued a certificate to Tennessee Gas Transmission Company to build a pipeline several miles into the Gulf of Mexico to purchase an estimated 1.6 billion to 6 billion Mcf from five large oil companies, whose initials, Catco, were used to designate the transaction (largest in gas history) at 22.4 cents per Mcf, with two-cent increases each four years thereafter. Tennessee Gas Transmission said it had to have this gas for present and prospective customers. The Catco companies advised the commission that unless the contract was approved at the 22.4-cent price, they would seek an intrastate sale."



of interruptible industrial gas, because residential consumers are unwilling to deprive themselves of home gas luxury or lose their large appliance investment and as long as pipelines are not forced to include real costs in their industrial sale prices, there will continue to be no real competition. The unrestrained use of gas for boiler fuel and especially electric generation, at low prices, is to a large extent the real reason for constantly increasing field demand and higher prices.

Problems for General Revision

If, as, and when a general revision of the Natural Gas Act is attempted, con-

sideration might be given to the following additional suggestions:

1. EXEMPTION of smaller producers.
1. This was presented by Senator Douglas four years ago and by Senators Long and Yarborough at the last session.

If a producer's yardstick is inaugurated, this exemption might become unnecessary, but even in that case it would help meet the commission's time schedules. The exemption could well cover all small users whose operations have no substantial effect upon interstate commerce in natural gas.

2. EXEMPTION of dual production gas. In this entire four-year discussion of producer decontrol there has been much said about the impossibility of allocating exploration and other costs between gas and oil where both were being produced. Much of the time in trying to arrive at costs in the seven pending cases has been consumed by testimony of experts offering various formulae for the proration of these costs. If some yardstick formula is promulgated by Congress at this session, a decision in this controversy might also become unnecessary.

Personally, I believe gas entering interstate commerce from dual production wells is less than 10 per cent of the total,² and would not object to exemption of gas from real oil wells, especially if a producer's yardstick is adopted.

3. THE commission should be directed to make a study of what inducements can be offered pipelines to promote construction and use of large storage facilities near large city markets, for residential peak service. A larger return to pipelines upon such investments might help to stabilize residential gas prices. A higher load factor for residential gas would reduce the fair differential between it and interruptible service.

4. THE commission should be given necessary regulatory tools, if the present are insufficient, to install in the commission office and prescribe adequate accounting procedures for producers, including a sufficient and qualified staff.

² For the figures leading to this conclusion see Table No. 4 of my letter to members of Congress dated January 20, 1958.

5. PIPELINES should have the same responsibility to serve cities, yes, regions they enter, as do public utilities in most states, and the commission should have authority to order extensions, enlargements, and additional compression equipment where towns, cities, or distributors therein desire and will pay for such service if it can be done on a basis of good economics for the public interest.

6. PIPELINES should be prohibited from entering other lines of business unconnected with gas pipeline operation and development of gas reserves. Exploration in search of new fields (wildcat) should be left to exploration for oil. As proof, may I cite report of El Paso Natural Gas Company which last year drilled 347 wells with only 11 dry holes? Oil was found in 59 wells, but the scarcity of dry holes shows that few, if any, were truly "wildcat."

7. THE Federal Power Commission has been doubtful as to its authority to fix prices under initial applications or certificates of convenience and necessity. This doubt should be removed.

8. ONE or more large utility companies and at least one electric plant have arranged to purchase natural gas in one of the Gulf producing states on a long-time basis, and have made contracts with one or more pipelines to carry this gas for a fee. The commission, correctly I believe, refused to approve the contract on the ground that approvals would "pre-empt" that much capacity. Congress should consider prohibiting the acceptance by pipelines of such contracts. If many of

PRODUCER AND GAS PIPELINE YARDSTICKS

the larger distributors entered into similar arrangements, almost all line capacity could thus be contracted for, leaving pipelines only limited facilities for delivery of gas to small distributors to service their consumers. Furthermore, and perhaps most important, large distributors with 100 per cent load-factor markets would make higher bids for field gas than other distributors could afford to pay.

9. CONGRESS should direct the commission, in fixing a fair return, whether to allow only actual taxes paid by producers or whether, in addition to receiving the saving of the 27½ per cent depletion charge upon their income tax return, they should also be allowed to include it as part of their fair return. Because of producers' contention that it should be allowed, it has come to be known in rate proceedings as the "phantom" tax.

Who Pays Field Price Increases?

ECONOMISTS are generally agreed that all taxes are paid, either directly or indirectly, by the ultimate consumer. This rule also applies to natural gas field price increases. There are probably 50 million families in the United States and half are residential users.

In 1956 (latest complete figures) 12

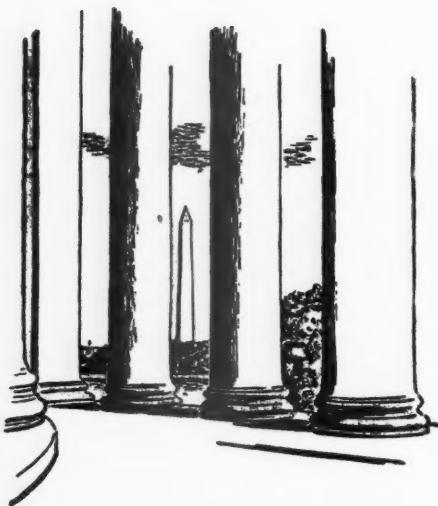
billion Mcf of natural gas were produced—from gas wells 8 billion, from oil wells 4 billion. Of the total, 1.4 billion were used for oil repressuring and 2.3 billion for field use, losses, and waste, chiefly in oil fields. This left actual marketed production of 8 billion Mcf, roughly the equivalent of gas well production only. New contracts and effective escalator clauses carrying prices exceeding 20 cents per Mcf will rapidly produce an average 10-cent field price increase, which based on 1956 marketed production, means \$800 million per annum. Of this amount, residential users will pay directly from the 10-cent increase and "tilting" from interruptible gas by means of two-part and similar rates \$480 million and indirectly by purchase of industrial producers \$80 million of interruptible and \$80 million of commercial and firm industrial costs—a total of \$640 million, or \$26 per consumer.

RECOVERABLE reserves of natural gas have increased each year since producers have felt they were of enough value to warrant their computation. At the end of 1957 the figure was 246 billion Mcf, a 20-year 1956 market supply.

Please figure the increased inventory value yourself.

"TAXATION and inflation are joined in an unholy wedlock which seems to bring forth the recessive evil genies of both. Taxation used to be thought of as a curb on inflation, and it was when revenues were used to reduce the national debt. But in a time when the government spends faster than it receives, taxation builds up inflation. Perhaps we have passed the point of no return in this trend, as they seem to have in England. It is certain that nothing can save us except a scientific revision of the tax laws plus the arrest of inflation. This is a large order for politicians at any time; it is too large for them in an election year."

—EDITORIAL STATEMENT,
Los Angeles Times.



Washington and the Utilities

Shift on Snake River Dams

THE U. S. Army Engineers will omit reference to a possible high dam at Hell's Canyon on the Snake river. Until recently the Army Engineers annually listed a high dam at Hell's Canyon as a key project in flood-control plans for the Columbia river and its tributaries, including the Snake. This will probably be left out of the new report being prepared by Army Engineers. Idaho Power Company, which will have two Snake river dams by the end of 1959, thus emerges as apparent winner of the seven-year fight.

To have a federal high dam at Hell's Canyon it would be necessary to persuade Congress and the President not only to authorize expenditures sufficient to take care of the structure itself, but an additional amount, estimated at more than \$100 million, to compensate for the resulting destruction of Brownlee and Oxbow dams of the Idaho Power Company. The Brownlee dam is almost complete and Oxbow is under construction. But the company has made no announcement for the scheduling of a third dam for which it holds an FPC license, a low Hell's Can-

yon dam. Proponents of a federal high dam are still talking for the record. Senator Morse (Democrat, Oregon) last November made a speech in which he indicated that Congress might again consider the proposal, if engineering studies prove that the benefits would be worth the extra expense of compensating the private companies. A public power engineer is reported to be making a study of how much material could be salvaged and how much power could be sold if a federal dam were authorized, even at this late date. But little chance is given such a proposal in Congress.

ON another Snake river proposal, the Izaak Walton League of Oregon recently announced it has changed its attitude toward a proposed moratorium of dam construction on the Snake river. The league said it no longer endorses the Oregon Water Resources Board's proposed embargo which would block a high Mountain Sheep dam on the Snake river below the mouth of the Imnaha.

The league said, "We don't want to be in a position of stalling so long on high

WASHINGTON AND THE UTILITIES

Mountain Sheep that we'll end up with Nez Perce," which would block the Salmon river. In a letter to the water resources board, signed by Luhr Jensen, Jr., of Hood River, Oregon, division president of the league, the league's executive board also asked the water resources board to defer action on its proposed withdrawal from appropriation of lower reaches of the Imnaha as well as a stretch of the Snake river from below the Salmon to above the Imnaha's outfall.

The Izaak Walton action reversed a stand the organization presented before a water resources board hearing on the embargo proposal last December.

Can We Have Fish and Dams Too?

Two Oregon Congressmen are now in disagreement on the question of how far the experts have progressed in solving the conflict between migratory fish and high dams. Senator Richard L. Neuberger told the U. S. Senate recently that \$700,000 is needed to launch a five-year fish research program aimed at "realistically solving the apparent impasse between fish and high dams," and Representative Al Ullman told the House the controversial Nez Perce dam ought to be conditionally authorized, noting "many hopeful signs" of progress in solving the fish passage problem.

Nez Perce is a high dam proposed for construction in the Middle Snake river downstream from the confluence of the Salmon and Imnaha rivers, both of which are spawning areas for migratory salmon and trout. Conservation groups and Secretary of Interior Fred A. Seaton have vigorously opposed Nez Perce because of the fish passage problem.

Representative Ullman saw hopeful signs of reaching a solution to this in the use of a skimmer device at the Pelton dam of Portland General Electric Company on

the Deschutes river, and fish farming—a practice in which the Japanese have employed artificial spawning beds successfully for migratory salmon.

"I am not suggesting that the Nez Perce dam be constructed while the fish problem remains unsolved, but I am strongly urging that this stretch of the Snake river be reserved for optimum development at a later date when there is a solution to the fish problem," Ullman declared.

NEUBERGER, long a foe of Nez Perce, told the Senate that "Time is running out for salmon and steelhead runs of the Pacific Northwest unless a fishery research program is launched immediately."

A five-year research program has been planned by the Columbia Basin Interagency Committee, he said, but funds are not listed in the President's proposed budget to activate the program. He said he would try to add \$700,000 to the Corps of Engineers' budget so it can co-operate with the Fish and Wildlife Service and state agencies in making the studies.

Neuberger noted the funds for the lower Columbia fish sanctuary program had been cut \$800,000 by the administration. "This may be described as an \$800,000 saving by the economy minded, but it is foolish and shortsighted to reduce the investment needed for survival of migratory fish in the Columbia."

Congress Group OK's AEC Plans

THE Joint Committee on Atomic Energy differs with the Atomic Energy Commission over a number of details of its nuclear power program. The committee chairman, Senator Anderson (Democrat, New Mexico), says his group may decide to authorize some additional

PUBLIC UTILITIES FORTNIGHTLY

projects. Nevertheless, on important policy concepts, the congressional committee is now basically in accord with AEC. The group favors the proposed construction of six new, mostly experimental, reactor projects. It is in accord with AEC's plan to subsidize 50 per cent of the capital costs of privately built prototype atom plants in addition to free fuel and research aid.

THE committee also likes AEC's announced willingness to build large prototype atom plants entirely with federal funds, if necessary, and operate them in the event private utilities won't build them. At a recent hearing some dissension was sown by a heated exchange between AEC Chairman McCone and committee members. But this misunderstanding has been dissipated by the agreement of AEC to allow the Hallam, Nebraska (public power project), nuclear plant to continue construction. There now seems to exist between the committee and AEC a readiness to resolve differences.

More than a half-billion dollars are involved in nuclear power projects by the nation's investor-owned electric utilities. Elmer L. Lindseth, chairman of the Edison Electric Institute's committee on atomic power, told the congressional Joint Committee holding hearings on progress of atomic power. He also revealed that more than 131 electric utilities are engaged in a broad industry-wide program which comprises 26 separate nuclear projects ranging from research and study groups to operation of plants already producing power.

Consolidated Edison Company's new atomic power plant under construction at Indian Point, New York, will cost \$10 million more and take about a year longer to complete than originally estimated. So testified John F. Fairman, senior vice president of the company. Delay of the proj-

ect was caused by unforeseen technical problems and a change in nuclear fuel design, Fairman stated, and a sharp rise in prices accounted for most of the increase in the plant's cost.

Gas Producer Bill Stymied

REPRESENTATIVE Harris (Democrat, Arkansas) may have the votes in his pocket to bring his natural gas bill out of committee, but he will probably not do so for awhile. He may not even do so for the rest of the session. As chairman of the House Interstate and Foreign Commerce Committee, Harris has been able to get more than enough bipartisan pledges to report favorably to the House on his bill for relieving the gas producers from full control by the Federal Power Commission. The Senate Interstate Commerce Committee is believed to be equally receptive, although Chairman Magnuson wants the House to act first and so does Senate Majority Leader Johnson (Democrat, Texas).

President Eisenhower is already on record as being sympathetic to any reasonable legislation along this line.

The real obstacle, however, is the uncertainty over the prevailing sentiment in the House of Representatives as a whole. Critics of the bill appear to have the edge—a pretty big edge, in fact. House Speaker Rayburn is therefore insisting that Harris keep his bill in the committee unless and until he can convince the Speaker that there are enough votes on the floor to pass the measure. This is the same condition on which the gas bill foundered in the last session after the Harris Committee had tentatively approved the bill by a substantial majority. Speaker Rayburn is himself in favor of the bill, but he is also very much opposed to suffering any floor defeat for his party leadership. Harris was

WASHINGTON AND THE UTILITIES

reported to be debating whether to take another informal poll of the House membership, as he did last year.

REA's Agriculture Department Ties Defended

AGRICULTURE Secretary Benson has opposed legislation to return the Rural Electrification Administration to its original status as an independent agency and take it out of the Agriculture Department. Benson wrote the Senate Agriculture Committee that the Bureau of the Budget also opposes the proposal, sponsored by Senators Carl T. Curtis (Republican, Nebraska) and Richard B. Russell (Democrat, Georgia). REA was set up as an independent agency in 1935 but transferred to the Agriculture Department in 1939.

In a letter to Committee Chairman Allen J. Ellender (Democrat, Louisiana), Benson said he felt the proposed legislation "would prejudice and prevent the achievement of the objectives" of the 1953 Reorganization Act which consolidated and strengthened the Agriculture Secretary's control over agencies in the department. Curtis, however, told a subcommittee considering the bill that the "best interests of the REA program will be served by re-establishing its independent status."

But Senator Hubert H. Humphrey (Democrat, Minnesota) opposed the measure because he said REA has many interests that are better served if it retains a connection with the Agriculture Department. Humphrey is the main sponsor of a bill to give the agency independent status but leave it under the "general supervision and direction" of the Agriculture Secretary. "I think we can accomplish the objectives without creating a new independent agency," Humphrey told the subcom-

mittee. Humphrey's bill also was supported by the National Rural Electric Co-operative Association.

IN another area of REA operation, Senator George D. Aiken said recently that the Comptroller General has tried to confuse the intent of Congress in decisions which could "play havoc" with the rural electrification program. The Vermont Republican made the statement before a Senate Agriculture subcommittee. He endorsed a bill which would clarify the intent of Congress to provide electric service through REA to unserved persons in rural America.

"These contributions of REA should be enthusiastically commended, not tarred with the brush of alleged illegality," the Senator said. Aiken argued that persons in rural areas actually without central station electric service are entitled to the benefits of the REA program. He said, however, that Comptroller General decisions have ruled that a person should be considered to be receiving service if he was in an area served by another supplier.

Such a ruling, Aiken said, "would enable hostile companies to deprive co-operatives of essential future REA financing and completion of area coverage merely by building a line through the heart of the co-operative's area." The final Comptroller General decision, Aiken said, would also require the REA Administrator to assess the willingness and ability of an existing supplier to furnish adequate and reasonable service.

"The net result of this decision would be to hamstring the REA as a lending agency, designed and created to bring electricity to rural America, and create a new, sprawling bureaucracy with the functions of a rural public service commission," he said.



A Study of the Spectrum

THE administration and the "loyal opposition" in Congress are not seeing eye to eye on the best way to go about a forthcoming full-scale study of the use and management of the radio spectrum. President Eisenhower, on the advice of a special advisory committee of his own selection, has informed Congress that he would like to appoint five members of a commission to study this important subject.

But Representative Harris (Democrat, Arkansas), chairman of the House Interstate and Foreign Commerce Committee, already has sought and obtained an appropriation of \$150,000 from the House for an investigation of this subject by the Communications and Power Subcommittee of his own group.

The two proposals are not necessarily mutually exclusive or duplicating. Presumably President Eisenhower has in mind a full-time commission of technical experts who would make a one-year investigation of both the government and private uses of radio frequency assignments, including the huge sector of the spectrum which the FCC has apparently been reserving for the Defense Department. The House group would presumably be more interested in legislative aspects.

Telephone and Telegraph

But politics being what they are, and White House relations with Congress being what they are these days, a certain amount of conflict is inevitable in this field. Already bipartisan opposition has flared up in Congress to the President's proposal, credited mainly to his Administrator of the Federal Civil Defense Administration, Leo A. Hoegh. In addition to Harris, there is Representative William G. Bray (Republican, Indiana), who wants a special congressional study of the way the Pentagon uses the spectrum. Since Representative Bray is a member of the Armed Services Committee, that group might also try to get into the act.

But there are indications that both Chairman Harris and Representative Bray consider that the administration's plan for finding a better way of dividing the spectrum frequencies between industrial and broadcasting services, and between the military and other government agencies, is really part of a maneuver to freeze the Defense Department's large stakes in spectrum allocation. Mr. Hoegh was putting the President's proposal for a five-man commission into the form of a resolution, to be sent up to Congress. But there is considerable doubt whether Congress is going to go along.

TELEPHONE AND TELEGRAPH

AN additional complication is the international aspect. Later this year the International Telecommunications Conference opens in Geneva. It will be asked to consider not only present global use of radio frequencies, as between the participating nations, but the increasingly complicated possibilities of outer space communications. President Eisenhower's Christmas message, heard around the world every ninety minutes via an American satellite, has stirred up plenty of questions on the future of transmitting television and other modes of intelligence via satellites and outer space missiles. The whole thing is in such a nebulous state that the Geneva conference would be able to do little more than block out a plan for future study of allocations which might be made at the following international conference, scheduled to be held five years later—in 1964.

New York Telephone Continues High Spending

THE New York Telephone Company plans to spend a near-record \$250 million on capital improvements this year, Keith S. McHugh, president, said in the annual report. He pointed out that it is likely that each year in the foreseeable future will call for programs of comparable size. This will make the matter of raising the big sums to finance these programs one of major importance.

New York Telephone has not been able to finance any appreciable part of its capital expansion out of retailed earnings, Mr. McHugh said. It has been forced instead to rely largely on bank borrowings, periodically repaid by the proceeds of issues of common stock and bonds, the latter being sold to the general public.

Regulation of TV Cables

THE Montana house of representatives is considering a senate state public service commission amendment to a bill calling for regulation of cable television companies. HB 208 passed the senate early this month by a margin of 45 to 6. It previously passed the house, 57 to 24, but the senate took out a provision making it effective immediately on approval by the governor. If the amendment is concurred in by the house and the governor approves it, the bill will become law, effective July 1st.

It will mean that two segments of the television industry in Montana will be under state commission regulation. Another bill already signed by the governor places very high-frequency boosters and translators under state control.

Capital City Rate Increase?

THE Chesapeake & Potomac Telephone Company of Washington, D. C., has indicated that an increase in rates will be sought soon. In the annual pamphlet report, H. Holmes Vogel, vice president in charge of the Washington subsidiary of the American Telephone and Telegraph Company, expressed concern with the need for more adequate earnings.

"With inflationary pressures continuing," Vogel said, "it is becoming increasingly more difficult to maintain our earnings at a satisfactory level." He pointed out that the last rate boost was allowed more than four years ago. Since then, he said, four rounds of general wage increases amounting to about \$4.4 million have been granted. These wage adjustments, he claimed, are about three times as great as the last increase in telephone rates granted in August, 1954.



Coming New Uses of Electricity

S. L. DRUMM, president of West Penn Power Company, made an interesting address on "Electricity in Our Future" at the Second Annual Power Progress Dinner in New York on February 5th. While the utility industry is now eighty years old, he held that the electrical era has just begun. The two largest electric industry manufacturers are spending about six per cent of their gross sales dollar for research and development, while all manufacturers average only one per cent. Looking ahead to 1979, when the industry will be one hundred years old, our population may reach 267 million and there will be 75 million households compared with 51 million now. By that time the average worker should use 29,000 kilowatt-hours a year—nearly three times the present amount. Here are some of the other forecasts made by Mr. Drumm:

Air-conditioned factory buildings will be practically universal—it will be difficult to get workers or customers otherwise, and climate control will also improve worker efficiency. Fully automatic operations will be standard, directed by punched cards and tapes. New revolutionary industrial processes will be commonplace: For example, ultrasonic waves will debark logs, homogenize pulp, disperse it, and purify the refuse.

Financial News and Comment

BY OWEN ELY

ON the main highway of tomorrow, air-conditioned cars will roll along guided and controlled electronically—safe from collision and overspeeding, while the drivers play games and chat. Moreover, the motive power of many of these cars will be electricity. (The electric car is now making a comeback, with improved batteries and a range of 70 miles—some utilities are already ordering them.) Flying vehicles will be almost 100 per cent electronically controlled to eliminate risk of collision and pilot error.

Health and hospitalization will be greatly improved by new electronic development. Hearing devices will be perfected so that even stone-deaf people can hear. Automation of hospital procedure will be extensive: Climate control, improved air

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FINANCIAL NEWS AND COMMENT

filtration, and color therapy will be developed. Electric incinerators and electronic ovens will be used. The nurse of the future will be stationed at a central point, observing her charges on a TV screen, and studying and recording their condition by remote electronic control.

In 1979 climate control will be universal in all new houses, with push-button operation of windows and doors. Luminescent lighting will be common and dusting will be done by electrostatic wands. With electronic cooking, meals will be prepared in less than five minutes. The average residence will use 10,000 kilowatt-hours. (Many will use 30,000-40,000 kilowatt-hours.)

THE utility industry in 1979 will have to produce more than 2.75 trillion kilowatt-hours and will need generating capacity of about 600 million kilowatts, or four times present capacity. The amount of new capital required for this heavy expansion program may well be over \$150 billion for the 20-year period, or an average of \$7.5 billion per annum—over twice the amount spent in 1957.

Budgetary and Tax Inequities

HOWARD C. PETERSEN, vice chairman of the Committee for Economic Development, in a recent address pointed out some of the fallacies of our budgetary and tax procedure. We spend too much on many things and not enough on others, he declared. It takes a dramatic event like "Sputnik" to awaken Washington and the public to the need for increased funds for missiles, and more research and education in science. Yet we still "squeeze" defense funds while expenditures for other programs continue to rise. The budget for fiscal 1959 is expected to exceed the previous year's by \$7.2 billion—

but national security plus education account for only \$2 billion of the increase while the remaining \$5 billion is spread throughout the budget.

Last year the CED pointed out how \$2 billion could be cut out of federal programs for agriculture, veterans, public works, housing, state grants in aid, and stockpiling. It was also urged that postal rates be raised sufficiently to wipe out the postal deficit, and that the President be given authority to veto individual items in the budget. Yet Congress has not yet adopted (effectively) any of a large number of adjustments recommended by the administration. We are afraid of inflation, of course, but if it comes it may be due largely to Congress' political predilections.

ANOTHER danger is possible impairment of production incentives through discriminatory and unreasonable forms of taxation. High taxes need not necessarily impair the growth potential of the economy if there are adequate safeguards to encourage investment in new products, processes, and businesses. High personal income tax brackets have uneven application because of special provisions favoring selected groups of taxpayers—the major inequity is not among different income groups, but between individuals at the same income level. Some of these "escape provisions" should be eliminated.

Another bad factor in our tax program is that whenever a new emergency arises, a heavier tax load is arbitrarily piled on the corporations, without studying the ways in which these taxes may be shifted to consumers or others. Corporation taxes may be doing lots of damage because they are indirect taxes.

Probably the most arbitrary part of our tax system is the excise tax. The public seems willing to see liquor and tobacco taxed heavily, and high gasoline taxes

PUBLIC UTILITIES FORTNIGHTLY

may be justified by highway construction. But there is no good reason for taxing selected items in other fields while others go scot-free. These latter taxes might well be replaced by a general tax applying uniformly to all commodities, Mr. Petersen holds.

Tatham Considers Growth Stocks Too High

CHARLES TATHAM, manager of the public utilities department of Bache & Co., and formerly vice president of Institutional Utility Service, Inc., has prepared a six-page brochure on "Electric Utility Common Stocks—Estimated Investment Value Ranges." His tabulation of 62 electric utilities presents alongside market price, four estimated values—a low and high for "basic investment value" (BIV) and the same for "growth value" (GV).

He evidently feels that current price-earnings ratios are too high for most of

the so-called growth utilities, none of which appear in his favored list. Following are the high and low of the "growth" values which he has worked out for some of these utilities—in most cases the highest theoretical value is around or below the recent market price:

	Approx. Price 2/4/59	Est. Growth Value
American Electric Power	\$50	\$43.51
Atlantic City Electric	41	33.39
Central & South West	56	44.52
Delaware Power & Light	58	58.68
Florida Power Corp.	27	21.25
Florida Power & Light	89	68.80
Gulf States Utilities	56	49.58
Houston Lighting & Power	73	58.68
Southwestern Public Service	42	36.42
Texas Utilities	63	51.60
Virginia Elec. & Power	36	29.34

ON the other hand, Mr. Tatham has selected some 22 stocks as "relatively attractive for investment purposes" which are usually classed as nongrowth or at best "semigrowth" issues. Thus he estimates a range of values for Boston Edison of 62-73 compared with the recent market price of 61, for Central Vermont



FEBRUARY UTILITY FINANCING

PUBLIC OFFERINGS OF ELECTRIC AND GAS UTILITY SECURITIES

Date	Amount (Mill.)	Description	Price To Public	Aver. Yield For Securities Of Similar Quality			Success Rating	Success Offer- ing
				Under- writing Spread	Offer- ing Yield	Moody Rating		
<i>Bonds</i>								
2/17	\$25	Public Service of Indiana 1st 4 1/2s 1989	100.42	.69C	4.35%	4.31%	Aa	b
2/25	10	Duquesne Light 1st 4 1/2s 1989	100.00	.67C	4.25	4.25	Aaa	b
<i>Common Stocks—Offered to Stockholders</i>								
2/6	17	Connecticut Light & Power	22.50	N	4.89		6.25%	f
2/6	11	Rochester Gas & Electric	37.50	.26N	4.80		6.90	f
2/18	5	Central Illinois E.&G.	32.00	N	4.50		6.33	—
2/27	28	American Natural Gas	57.50	.13C	4.52		7.69	—
<i>Common Stocks—Offered to Public</i>								
2/5	46	Southern Company	35.50	.67C	3.66		4.85	c
2/26	1	Western Gas Service	12.00	N	—		5.68	—

C—Competitive. N—Negotiated. b—Reported issue was fairly well received. c—Reported issue sold somewhat slowly. f—Unsubscribed shares offered to employees.

Source, Irving Trust Company

FINANCIAL NEWS AND COMMENT

Public Service a range of 23-28 *versus* the price of 22, for Toledo Edison 18-22 *versus* the price of 17, etc. He apparently feels that potential values in the static type of issue have been neglected, in the current craze for growth stocks on the part of institutional and other buyers interested mainly in capital gains.

While he does feel that the growing volume of certain types of institutional funds which are investing in common stocks may justify a somewhat higher P-E ratio than the 14.2 average of the past twenty-three years (based on the Moody utility average), he evidently feels that present ratios of about 22-25 for growth utilities are on the high side. Political and regulatory developments this year are likely to be troublesome and will have to be watched with care. Moreover, he feels that rapid growth in itself introduces two risk factors—possible overexpansion on the part of the utility company, and the market tendency toward excessive P-E multiples.

WHILE Mr. Tatham does not fully describe his formulas for arriving at estimated values, he explains that basic investment value is computed "essentially by applying reasonable price-earnings ratios, adjusted for leverage, to those per share earnings that would accrue to the common stock, assuming that the company were earning a reasonably 'full' overall return, and after deducting the full annual interest and preferred dividend requirements on senior capital. In each instance the overall return is determined in accordance with our understanding of the rate-making policies of the regulatory jurisdiction under which the company operates."

Estimated *growth value* is based on a projection of earnings over the next three years and gives more emphasis to rate of

growth. There is no detail on either the method of making the projection of earnings, or the price-earnings ratio which is applied to these earnings, but states that "a steady and continuous rate of gain in earnings . . . seems unlikely and both prudence and common sense should lead us to assume that historically high price-earnings ratios are not likely to endure permanently."

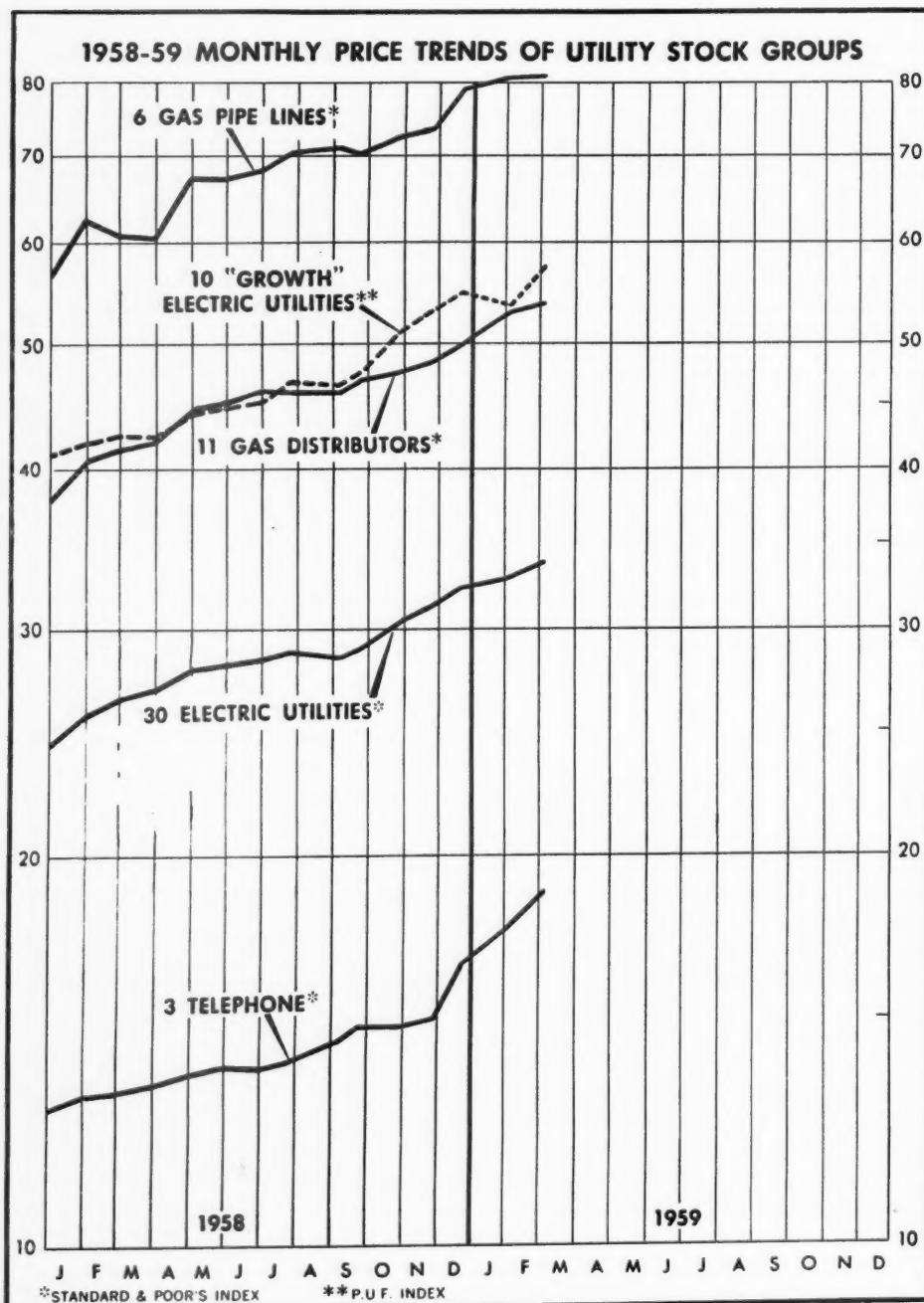
This conservative point of view may prove a sobering influence in the purchase of growth utilities—for if these should be bid up to unreasonably high levels (as happened in 1929, and is now characteristic of many electronics and other "romance" stocks) the results might prove quite unfavorable to the utilities themselves, from both a regulatory and financing angle, in future years.

However, Mr. Tatham's study would have been more complete and interesting if he had made a more detailed explanation of his methods, and devoted some attention to discussing special factors in present-day earnings, such as the interest credit on construction and the "flow-through" method of treating tax savings.

Bond Market's "Breather" Over?

THE bond market, aided by a light corporate offering calendar, showed moderate improvement in January and February. Even the municipal market was able to absorb substantial offerings and show a modest upturn in prices. The Treasury Department's difficulties with new offerings, dating from the speculative fiasco of "free riders" last summer, were momentarily forgotten, although the bad roll-over of early February, when holders of over \$2 billion maturing securities demanded cash, caused some uneasiness.

PUBLIC UTILITIES FORTNIGHTLY



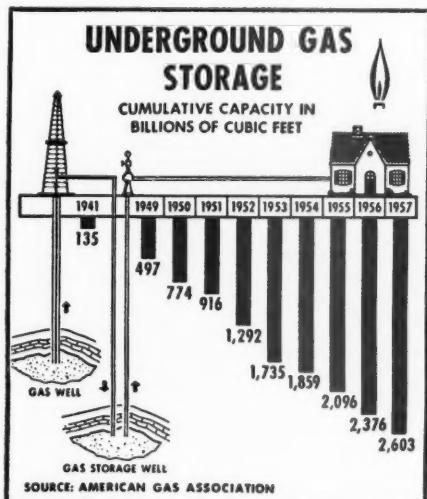
FINANCIAL NEWS AND COMMENT

The outflow of gold to Europe seemed to have slowed.

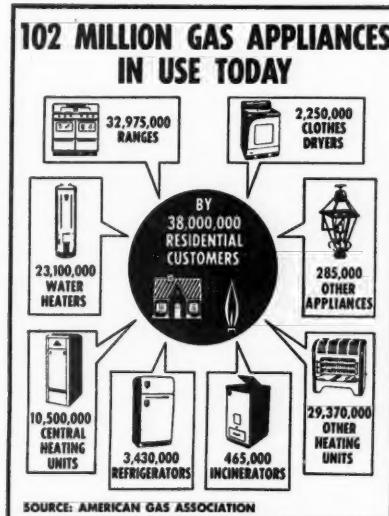
HOWEVER, the Federal Reserve Board has, as usual, been trying to "carry water on both shoulders" without too much success. The board evidently feels that inflation is the paramount danger, but at the same time it is irked by continuing unemployment (attributed to improved technology) in an otherwise booming economy; it is by law directed to use its best efforts to maintain employment. Hence it delayed another raise in rediscount rates, which had been expected earlier; and when this did come recently, it was badly timed, coming on the heels of recent reassurance by a board official before the Washington investment analysts. The action of four banks in raising their discount rates gave the bond market a slight chill, reminding them that spring had not yet arrived, and the Treasury had to raise its rates for short-term funds.

MEANWHILE more serious attention is being given by Washington to the inflation problem, and three broad investigations have been initiated—headed respectively by Vice President Nixon, Raymond Saulnier of the Council of Economic Advisers, and Senator Douglas of the Joint Economic Committee—and the Federal Reserve is also investigating the market for government bonds. But the theory that we need moderate but continuing doses of inflation to maintain prosperity—the Keynesian philosophy of the depression-ridden 1930's—dies hard. (See Sumner Slichter's "Argument for Creeping Inflation," *New York Times* magazine section, March 8, 1959.)

Thus we seem to be at the crossroads. Money in circulation remains at record high levels, around \$32 billion compared with \$5 billion in the 1920's. The President has warned Congress that he may have to ask for a higher rate on long-term bonds than the present 4½ per cent.



Increasing numbers of househeating customers are being served as a result of development of underground natural gas storage reservoirs. Piped in during low demand periods, stored gas helps provide heat for approximately 20 million homes this winter. The nation's underground storage capacity has increased more than 10-fold in the past decade.



MORE than 102 million gas appliances valued at \$19.5 billion are currently in use in the United States. The nation's 38 million gas-using families — 29 million served by utility gas and the remainder by LP or bottled gas — average nearly three appliances each.

PUBLIC UTILITIES FORTNIGHTLY

Irving Trust's Improved Financing Calendar

JOHN CHILDS, vice president of the Irving Trust Company, deserves the commendation and thanks of the utility industry for his constructive efforts to improve the records of current and future utility financing. This department makes liberal use of the data in his bulletins (along with other sources) in preparing our own tables.

The Irving Trust Company's monthly "Financing Calendar," covering future utility security issues, has now been set up in a new and improved format, for

easier reference, and will be issued twice a month (discontinuing the interim supplement).

Section I consists of explanatory material; Section II is the schedule of financing for a year ahead; and Section III lists principal utilities alphabetically, with their anticipated financing. Section II contains a series of improved charts showing the volume of financing by quarters and by types of securities, with some estimated totals for calendar year 1959; additional charts have also been added covering totals for all corporate securities, state and local government issues, and mortgages.



RECENT FINANCIAL DATA ON GAS UTILITY STOCKS

Annual Rev. (Mill.)	3/3/59 Price About	Divi. dend Rate	Approx. Yield	Recent Share Earnings	% In- crease 1953-58	Aver. Incr. In Sh.		Price- Earnings Ratio	Div. Pay- out	Appox. Common Stock Equity
						In Sh.	1953-58			
<i>Pipelines and Integrated Systems</i>										
\$ 5 O	Ala.-Tenn. Nat. Gas	24	\$1.20(k)	5.0%	\$1.37De	4%	14%	17.5	87%	41%
205 S	American Nat. Gas	67	2.60	3.9	4.44De	13	8	15.2	59	39
58 A	Arkansas Louis. Gas	56	1.20	2.1	1.85De'57	19	47x	30.3	65	52
55 O	Colo. Interstate Gas	56	1.25	2.2	2.30De	3	9	24.3	54	24
427 S	Columbia Gas System	23	1.00	4.3	1.44De	10	26	16.0	70	43
7 O	Commonwealth Gas	10	—	—	.40De	D26	—	25.0	—	77
17 O	Commonwealth N. G.	51	2.00	3.9	3.24De	6	12	15.7	62	43
11 S	Consol. Gas Util.	20	.90	4.5	1.57Oc	D1	8	12.7	57	57
280 S	Consol. Nat. Gas	56	2.10	3.8	3.17Se	D7	12x	17.7	66	57
19 O	E. Tenn. Nat. Gas	12	.60	5.0	.90De	7	23	13.3	66	25
301 S	El Paso Nat. Gas	37	1.30	3.5	**1.67De'57	13	12x	22.2	78	20
50 S	Equitable Gas	39	1.60	4.1	2.34De	5	6	16.7	68	44
34 O	Houston N. G.	28	.80	2.9	1.48Oc	D10	11x	18.9	54	18
20 O	Kansas Nebr. Nat. Gas ..	43	1.80(f)	4.2	2.49Se	D5	12x	17.3	72	32
109 S	Lone Star Gas	45	1.80	4.0	2.28Se	D4	10x	19.7	79	43
75 S	Miss. River Fuel	41	1.60	3.9	2.00De'57	D14	2x	20.5	80	49
26 S	Montana Dakota Util.	35	1.00	2.9	1.64Se	11	12x	21.3	61	31
25 O	Mountain Fuel Supply ..	28	1.20	4.3	1.53Se	D9	8x	18.3	78	62
86 S	National Fuel Gas	24	1.10	4.6	1.43Se	6	—	16.8	77	58
139 S	Northern Nat. Gas	34	1.40	4.1	1.62De	D13	9	21.0	86	35
43 S	Oklahoma Nat. Gas	29	1.12	3.8	1.76De	34	6	16.5	64	34
117 S	Panhandle East. P. L.	54	1.80	3.3	2.74De'57	—	2x	19.7	66	41
13 O	Pennsylvania Gas	24	1.20	5.0	2.18De'57	D3	4x	11.0	55	59
188 S	Peoples G. L. & Coke ..	58	2.00	3.4	3.08De	5	4	18.8	65	41
22 O	Pioneer Nat. Gas	35	1.40	4.0	1.85Se	36	13x	18.9	76	36
101 S	Southern Nat. Gas	44	2.00	4.5	2.01Oc	NC	4x	21.9	100	41
38 O	Southern Union Gas	28	1.12	4.0	1.53De'57	—	10x	18.3	73	31
313 S	Tenn. Gas Trans.	38	1.40	3.7	1.78De	11	15	21.3	79	20
266 O	Texas East. Trans.	35	1.40	4.0	2.34De	D7	16	15.0	60	22
96 O	Texas Gas Trans.	35	1.20(b)	3.4	1.98Se	D9	16x	17.7	61	27
97 O	Transcont. Gas P. L.	25	1.00(b)	4.0	1.46Se	D4	29x	17.1	68	21
300 S	United Gas Corp.	41	1.50	3.7	2.42Se	D2	12x	16.9	62	41
Averages					3.9%			2%	12%	18.5
Averages					3.9%			2%	12%	18.5
Averages					3.9%			2%	12%	18.5

FINANCIAL NEWS AND COMMENT

<i>Annual Rev. (Mill.)</i>	<i>(Continued)</i>	<i>3/3/59 Price About</i>	<i>Divi- dend Rate</i>	<i>Approx. Yield</i>	<i>Recent Share Earnings</i>	<i>% In- crease</i>	<i>Aver. Incr. In Sh. Earns. 1953-58</i>	<i>Price- Earns. Ratio</i>	<i>Div. Pay- out</i>	<i>Approx. Common Stock Equity</i>
Retail Distributors										
32 S	Alabama Gas	34	\$1.60	4.1%	\$2.16De	D6%	13%	15.7	74%	42%
53 O	Atlanta Gas Light	38	1.60	4.2	2.20De	D4	11	17.3	73	34
3 O	Berkshire Gas	20	1.00	5.0	1.24N	5	31x	16.1	81	39
6 A	Bridgeport Gas	33	1.60	4.8	2.03Se	10	1x	16.3	79	50
5 O	Brockton-Taunton Gas ..	19	.95	5.0	1.18De'57	D8	43x	16.1	81	41
70 S	Brooklyn Union Gas	56	2.20	3.9	3.21Se	19	13x	17.4	69	42
4 O	Cascade Nat. Gas	8	—	—	Def.De'57	—	—	—	—	18
39 O	Central Elec. & Gas	23	1.00	4.3	1.49Se	—	15x	15.4	67	18
13 O	Cent. Indiana Gas	16	.80	5.0	1.11Se	—	7x	14.4	72	67
6 O	Chattanooga Gas	6	.35	5.8	.41N	D2	17x	14.6	85	43
66 O	Gas Service	33	1.52	4.6	2.68Se	66	7x	12.3	51	35
8 O	Hartford Gas	44	2.00	4.5	2.31De	21	—	19.0	87	37
3 O	Haverhill Gas	27	1.40	5.2	2.03)a	15	14	13.3	69	53
20 O	Indiana Gas & Water ..	26	1.00(b)	3.8	1.52De	8	11	17.1	66	45
52 S	Laclede Gas	22	.90	4.1	1.21De	D8	5	18.2	74	34
5 O	Mich. Gas Util.	21	1.05	5.0	1.19Oc	3	18x	17.6	88	34
43 O	Minneapolis Gas	32	1.50	4.7	1.73Se	D16	12x	18.5	87	42
15 O	Miss. Valley Gas	28	1.20	4.3	2.31Se	67	14x	12.1	52	33
5 O	Mobile Gas Service	25	1.10	4.4	1.77Se	44	—	14.1	62	35
7 O	New Haven Gas	40	1.90	4.8	2.36De'57	4	—	16.9	81	68
15 O	New Jersey Nat. Gas ...	49	1.60(h)	3.3	2.62Se	13	—	18.7	61	34
80 O	No. Illinois Gas	26	.88	3.4	1.44N	7	—	18.1	61	54
9 O	North Penn Gas	12	.60	5.0	.85Je	D5	8x	14.1	71	58
18 O	Northwest Nat. Gas ...	18	.72	4.0	* .95De	D6	—	*19.0	76	36
240 S	Pacific Lighting	54	2.40	4.4	2.76De	14	8	19.6	87	36
10 O	Piedmont Nat. Gas	32	1.00	3.1	1.84De	5	21	17.4	54	24
2 O	Portland Gas Lt.	15	.75	5.0	2.31De	128	31	6.5	32	27
10 A	Providence Gas	12	.56	4.7	.60De	20	5	20.0	93	50
3 A	Rio Grande Valley Gas ..	4	.24	6.0	.32Je	24	8x	12.5	75	52
6 O	So. Atlantic Gas	17	.80	4.7	1.39Ma	43	5x	12.2	58	30
12 S	So. Jersey Gas	50	1.60	3.2	2.35De	7	18	21.3	68	47
29 S	United Gas Impr.	55	2.20	4.0	3.15De	27	5	17.5	70	64
60 S	Wash. Gas Light	51	2.24	4.4	3.37De	21	12	15.1	66	41
11 O	Wash. Nat. Gas	16	(g)	—	.54Se	13	—	—	—	41
8 O	Western Ky. Gas	18	.60(i)	3.3	1.56Se	135	4x	12.3	41	38
Averages					4.4%		19%	10%	16.0	70%



RECENT FINANCIAL DATA ON TELEPHONE, TRANSIT, AND WATER STOCKS

<i>Annual Rev. (Mill.)</i>		<i>3/3/59 Price About</i>	<i>Divi- dend Rate</i>	<i>Approx. Yield</i>	<i>Recent Share Earnings</i>	<i>% In- crease</i>	<i>Aver. Incr. In Sh. Earns. 1953-58</i>	<i>Price- Earns. Ratio</i>	<i>Div. Pay- out</i>	<i>Approx. Common Stock Equity</i>
Communications										
	<i>Bell System</i>									
\$6,771 S	Amer. T. & T. (Cons.)	.247	\$9.90†	4.0%	*\$14.01De	8%	4%	*17.6	71%	64%
303 A	Bell Tel. of Canada	44	2.00	4.5	2.00De'57	D11	—	22.0	100	66
46 O	Cin. & Sub. Bell Tel.	97	4.50	4.6	4.95De'57	D12	1x	19.7	91	100
232 A	Mountain Sts. T. & T.	153	6.60	4.3	9.21N	D1	3x	16.6	72	73
324 A	New Eng. T. & T.	184	8.00	4.3	8.54Se	3	2x	21.4	94	55
864 S	Pacific T. & T.	167	7.00	4.2	8.81N	14	1x	19.0	79	59
108 O	So. New Eng. Tel.	45	2.00	4.4	1.90De'57	D13	—	23.7	105	64
Averages					4.3%		D2%	1%	20.0	88%
Independents										
5 O	Anglo-Canadian Tel.	45	\$1.20	2.7%	\$3.11Se	D4%	56% 5x	14.5	39%	55%
41 O	British Col. Tel.	47	2.00	4.3	1.90Se	D27	—	24.7	105	31

PUBLIC UTILITIES FORTNIGHTLY

Annual Rev. (Mill.)	(Continued)	3/3/59 Price About	Divi- dend Rate	Approx. Yield	Recent Share Earnings	% In- crease	Aver. Incr. In Sh. Earns. 1953-58				Div. Pay- out	Approx. Common Stock Equity
							Price- Earns. Ratio	Div. Pay- out	Approx. Common Stock Equity			
4 O	Calif. Inter. Tel.	16	.70	4.4	.89De	D19	NC	18.0	79	24		
18 O	Calif. Water & Tel.	26	1.20	4.6	1.54Je	1	—	16.9	78	48		
18 O	Central Tel.	26	1.00(b)	3.8	1.80De	D9	5	14.4	56	28		
5 O	Commonwealth Tel.	20	.90	4.5	1.24Je	D16	—	16.1	73	37		
4 O	Florida Tel.	29	1.00	3.4	1.00My	D10	1x	29.0	100	46		
289 S	General Telephone	71	2.00	2.8	3.12N	2	32x	22.8	64	34		
19 O	Hawaiian Telephone	22	1.00	4.5	*1.26Ja	6	4	*17.7	79	43		
7 O	Inter-Mountain Tel.	16	.80	5.0	.94De'57	17	2	17.0	85	63		
21 O	Rochester Tel.	26	1.00	3.8	1.29Oc	NC	—	20.2	77	33		
4 O	Southeastern Tel.	23	.90	3.9	1.11De'57	D21	—	20.7	81	54		
10 O	Southwestern St. Tel.	26	1.20	4.6	1.53N	NC	4x	17.0	78	35		
34 O	United Utilities	33	1.25	3.8	1.54De'57	D6	1x	21.4	81	40		
15 O	West Coast Tel.	25	1.00	4.0	1.18Se	D22	4x	21.2	85	35		
260 S	Western Union Tel.	37	1.20	3.2	2.03De'57	D8	—	18.2	59	85		
Averages				4.0%		D9%	7%	19.5	77%			
Transit Companies												
21 O	Baltimore Transit	6	—	—	\$1.01De'57	124%	—	5.9	—	41%		
12 O	Cincinnati Transit	6	\$.30	5.0%	.52De'57	9	—	11.5	58	49		
65 S	Fifth Ave. Coach	18	—	—	2.46De'57	D29	—	7.3	102	68		
308 S	Greyhound Corp.	19	1.00	5.3	1.22De'57	D4	—	15.6	82	45		
25 S	Nat. City Lines	29	2.00	6.9	2.74De'57	12	9x	10.6	73	94		
13 O	Niagara Frontier Trans.	9	.60	6.7	.77De'57	35	—	11.7	78	78		
65 O	Phila. Trans.	8	.60	7.5	1.23De'57	D25	—	6.5	49	38		
17 A	Pittsburgh Rys.	11	.25	2.3	Deficit	—	—	—	—	90		
6 O	Rochester Transit	5½	.40	7.3	.64De'57	D6	29x	8.6	63	100		
22 O	St. Louis P. S.	11	1.00	9.1	.57De'57	D17	19x	19.3	175	94		
14 S	Twin City R. T.	12	1.20	10.0	.24De	D70	—	—	500	65		
21 O	United Transit	6	.60	10.0	.87Ma'57	D1	11x	6.9	69	51		
Averages				7.0%		3%	—	10.4	125%			
Water Companies												
<i>Holding Companies</i>												
43 S	American Water Works .	14	\$.60	4.3%	\$1.01De	—	—	13.9	59%	17%		
<i>Operating Companies</i>												
5 O	Bridgeport Hydraulic	34	\$1.70(f)	5.0%	\$2.05De'57	D2%	5% ^x	16.6	83	53		
16 O	Calif. Water Service	57	2.40(j)	4.2	3.32Ja	1	1	17.2	72	36		
4 O	Elizabethtown Water	49	2.00	4.1	3.90De'57	19	30x	12.6	51	58		
11 S	Hackensack Water	46	2.00	4.3	3.18De'57	11	6x	14.5	63	38		
8 O	Indianapolis Water	23	1.00	4.3	1.22De	D4	6	18.8	82	35		
6 O	Jamaica Water	43	2.20	5.1	2.86Se	D1	—	15.0	77	26		
5 O	New Haven Water	68	3.40	5.0	2.30De'57	D20	—	29.5	148	61		
2 O	Ohio Water Serv.	31	1.50(b)	4.8	1.63Se	D38	10x	19.0	92	32		
8 O	Phila. & Sub. Water	46	.50(b)	1.1	2.84Se	D15	7x	16.2	18	28		
2 O	Plainfield Un. Water	63	3.00	4.8	4.42De'57	D12	2x	14.3	68	63		
5 O	San Jose Water	61	2.60(f)	4.3	4.02Ja	12	15	15.2	65	41		
5 O	Scranton-Springbrook	24	1.00	4.2	1.57Se	6	7x	15.3	64	29		
5 O	South. Calif. Water	20	.80	4.0	1.19N	NC	12x	16.8	67	31		
4 O	W. Va. Water Service ..	21	.68(d)	3.2	1.47De	D20	—	14.3	46	17		
Averages				4.2%		D5%	7%	16.8	70%			

A—American Stock Exchange. O—Over-counter or out-of-town exchange. S—New York Stock Exchange. Ja—January; F—February; Ma—March; Ap—April; My—May; Je—June; Jy—July; Au—August; Se—September; Oc—October; N—November; De—December. NC—Not comparable. NA—Not available. D—Decrease. *On average shares. †Rate raised to \$9.90, effective next July (\$3.30 on split shares). (a) Adjusted to eliminate 13 cents per share of nonrecurring tax savings. (b) Also stock dividend in 1958. (d) Also 1 per cent stock dividend quarterly. (e) Also 10 per cent stock dividend May 19, 1958. (f) Includes extras. (g) Four per cent stock dividend June 6, 1958. (h) Also 2 per cent stock dividend December 1, 1958. (i) Also 5 per cent stock dividend December 29, 1958. (j) Also 5 per cent stock dividend March 19, 1959. (k) Also 20 per cent stock dividend March 9, 1959. **On combined common and common B stocks. x—1952-57.



What Others Think

The Due Diligence Meeting—Challenge and Opportunity

CONTINUED growth in the demand for services means that vast amounts of new capital will be required to finance the expansion of the country's public utilities. The investor's dollar is and will increasingly be a competitively sought commodity, and utility managements will have to put their best foot forward in selling themselves to the investing public.

This communication can and should be undertaken at many levels under a carefully developed and fully maintained investor relations program. As an important element of such a program, the "due diligence meeting" or, as it is more descriptively called, the underwriters' "information meeting," deserves major consideration. For it is here that the utility company has an opportunity to tell its story to an influential and directly interested audience, the people whose job it is to appraise correctly the current market value of the securities to be sold. Market values, particularly of common stocks, are constantly shifting and a small variation in price, due perhaps to wholly unforeseen developments, can mean the difference between profit and loss to the underwriting syndicate that first buys the securities from the company and then sells them to the public.

The underwriters, quite naturally, are looking for merchandise which will be

attractive to investors. The company, in turn, wants to get the best price possible for the securities it is selling. The information given at the due diligence meeting, the manner of presentation—of the intangibles as well as the facts—all contribute to a determination of the quality and worth of the offering, and, consequently, the justifiable "bid" price.

And indeed the due diligence audience, as it is customarily encountered today, has great professional variety beyond the prospective bidders alone. Included are many security analysts from brokerage firms, banks, insurance companies, investment funds, and rating agencies, whose interests are focused through keen merchandising eyes and who in many instances represent important secondary markets for a company's securities.

What type of information do the buyers want? What sort of presentation makes a favorable impression and helps assure the success of the new financing? What opportunities, and problems, are involved when the utility undertakes to meet with and tell its story to prospective buyers?

Concise Presentation Preferred

FIRST, bearing in mind that there are specific legal aspects which will have bearing on what information will be given

PUBLIC UTILITIES FORTNIGHTLY

out at the due diligence meeting (and which will be discussed at a later point), what do the buyers and analysts who come to these meetings look for? In general, what is preferred is a concise presentation similar to that made before an analysts society; and, based on those due diligence meetings which stand out over the past few years as having been particularly effective, a twenty to twenty-five minute compilation of material facts about the company seems to be appropriate.

THIS portion of the meeting is perhaps best carried out by the chief executive officer of the company, supplemented by remarks by the financial vice president, or other officers within whose purview certain pertinent and specialized financial or operating data may fall. There can follow a question period, or possibly a quick review of the prospectus by the chief executive officer or other financial officer, and then a general question period. This order of the meeting is certainly not binding and several variations are possible, as long as the overall coverage is achieved.

But it is earnestly urged that a perfunctory review of the prospectus, and a half-hearted attempt thereafter to elicit questions, not be allowed to suffice for so important an opportunity as the meeting offers. Occasionally, companies take this approach and subsequently complain of poor and dwindling attendance. There is too much evidence to the contrary to entertain any idea of limited interest in these meetings. For many companies—great growth companies, as well as some of the industry's less dynamic and more mature operations—again and again return before large due diligence audiences, which have come quickly to know who is going to make a worth-while presentation and who is not; and let it be noted that we are not talking of fine speeches, but

of full and fair disclosure of material facts.

THE story should be told as ably and effectively as possible, stressing all of the favorable facts which tend to assure profitable operation, but certainly not neglecting, or glossing over, less favorable factors, if they exist. Certainly, the professional audience addressed is aware of negative aspects, and a frank discussion of efforts being made to overcome problems, or obstacles, makes an infinitely better impression than an attempt to sweep them under the rug, particularly if the efforts are intelligent and likely to meet with success.

A suggested framework follows for remarks that a company president might make at a due diligence meeting. This outline was prepared for a particular company and should be suitably varied to cover the circumstances of another. In this case, the president undertook the initial presentation, giving a general picture of his company, and was followed by the financial vice president who discussed the details of the financing.

Outline for Comments by John Roe, President, Hometown Electric Company, At Due Diligence Meeting

“GENTLEMEN, first allow me to thank you all for joining us today. It has been about a year since our last financing and I do indeed appreciate the continued interest you are showing in our company. Before telling you something about Hometown, I should like to introduce my associates who are here with me today.

(Introduce others)

“Now I should like to talk briefly about Hometown and tell you something about our problems and how we have met them, our opportunities and outlook, and how optimistically we view the future. My re-

WHAT OTHERS THINK

marks will be brief and then Mr. Smith, our treasurer, will review the prospectus with you and answer any financial questions you may have."

Discuss briefly

1. *Service Territory*—(five minutes)

- A. Population growth.
- B. Economic development. Basic economic activities.
- C. Future economic potentials.

2. *Operations*—(five minutes)

- A. Serve small towns rather than large urban areas.
- B. Decentralization of industry.
- C. Large residential and commercial load assures stability of earnings as well as good growth. Residential sales have expanded even when industrial sales have slackened.
- D. Fuel and labor costs; fuel adjustment clauses; production economies.
- E. Power supply. System in strong position to meet future demands.

3. *Power Contracts*—(three minutes)

- A. With government installations.
- B. Any unique major industrial contract.

4. *Regulation*—(three minutes)

- A. Commission is intelligent and reasonable.
- B. Homestate is legally a "fair value" state. While commission has given major weight to net investment in determining the rate base, the "fair value" requirement adds a "plus factor" to the earnings for the common stock and should help maintain a strong common stock equity.

5. *Management*—(three minutes)

- A. Strong team of younger men coming along. Management earnestly promoting employee training.
- B. Many company officials active in

civic endeavors. All employees good salesmen for company in communities served.

6. *Public Relations*—(three minutes)

- A. Customer service programs.
- B. Industrial development efforts.
- C. Public power.

"Now, I shall turn the meeting over to Mr. Smith and he will discuss the bond issue and our construction and financing plans."

THE foregoing process is readily adaptable to any given situation and stress will be placed on those facets in the order of their materiality in the particular utility operation. For example, if power contracts have no special features, or are not important, then time set aside for them in the proposed outline will be better devoted to other matters.

As far as the entire meeting is concerned, experience seems to dictate the suggested outside limit of about twenty-five minutes for the presentation by the chief executive officer and some fifteen to twenty minutes for the financial vice president's or treasurer's remarks and prospectus review. This, then, will allow an active question period, of from fifteen to twenty-five minutes. And, indeed, the timing of the meeting (which if it is effective will run about one hour) is to be carefully observed. For any indication of a desire on the part of the company to bring the question session to a premature end can only serve to nullify an overall effort toward all feasible frankness and an apparent willingness to undertake all reasonable inquiry.

Questions Must Be Prepared for

IN preparing for a due diligence meeting the company will do well to attain in

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advance some familiarity with the questions likely to be raised. Satisfying and reasonable answers are imperative and a logical explanation must be given if a question has touched upon a confidential area to which the company cannot be expected to reply fully or in detail.

The following is a composite list of questions representing about thirty different electric, gas, and telephone company due diligence meetings. While some of the questions as presented are perhaps localized in reference to a particular company, the type of inquiry merits attention. All of the questions listed have been encountered with considerable frequency in one form or another and in most instances appear exactly as asked.

Questions Frequently Asked at Due Diligence Meetings

WHAT is your construction program for the next two or three years, by years?

What are your plans for further financing for the coming year? For the next two or three years, by years?

What rate of return are you earning? On electric property? On gas property? Overall?

Will you discuss regulatory atmosphere?

Will you expand your remarks on municipal competition?

Will you please discuss further public power efforts in your territory?

What is your common stock equity ratio policy?

What capitalization ratios do you favor for your company?

What is your dividend policy in respect to pay-out?

What are the prospects for nontaxability of dividend?

What is your expected rate of growth in kilowatt-hour sales and revenues next

year? Compounded annual rate for next few years?

What earnings do you expect for this year? Next year? (Your lawyers will tell you how to answer this.)

What effect does weather have on earnings?

What is your space-heating saturation? What is the potential?

What is your power supply situation?

Can you tell us about your power purchase contracts?

What of tax deferrals due to rapid amortization?

Are you using liberalized depreciation? What is your commission's attitude concerning rapid depreciation?

CAN you give us an estimate of interest charged to construction for next three years? If you do not capitalize it, why not?

How much competition do you expect from gas in cooking? Water heating? Space heating? Domestic refrigeration?

Will you discuss competitive fuel costs?

Book value of common has practically stood still in last few years. Why has it not been built up, as has been the case with other utilities?

Will you estimate average cost of coal per ton for the coming year?

What percentage of kilowatt-hour sales is covered by fuel adjustment clauses?

Is there any bondable reserve after the present issue?

Will you discuss summer peak prospects and plans for stepping up house-heating program to sell winter capacity?

How did the recent recession affect your service area? And what were the effects of lower industrial activity on your own business?

Will you discuss further prospective power demands by new industry or additions to existing industry?

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"HAD MORE HARD LUCK ON THIS POLE LINE!"

Can you give us some additional data on the cost elements of the heat pump as compared with competitive fuels?

Who are the bidding groups?

How much are the legal fees?

Additional Questions Applicable to Gas Companies or Gas Operations

WHAT is your gas space-heating saturation? What is the potential? How many new space-heating customers will be added this year?

What is your gas supply situation? Will you discuss company-owned reserves?

How about gas shortage?

Can you tell us about your gas purchase contracts?

What about your gas stripping operations?

How much competition do you get from electricity in cooking? Water heating? Space heating? Domestic refrigeration?

Will the electric heat pump provide serious competition in your area of the country?

Will you tell us something of the gas air conditioner and its prospects?

Do you expect the cost of gas to rise significantly over the next few years?

How will gas producer legislation affect you?

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What rate of return are you seeking in new rate filings?

Do sinking funds on your debentures depend in any way on geologists' estimate of reserves?

Will you discuss the use of natural gas and what are the straight natural gas possibilities?

Will you give us your thinking on gas production business?

Will you discuss Canadian gas; will it come into your system and at lower costs?

Additional Questions Specifically Referring to Telephone Companies

Do you believe that the telephone business is inherently more risky than the electric or gas business?

Please discuss the willingness of commissions throughout the country to accept your financing policy, in applying for higher rates.

In operating expenses last year, what is the figure for wages alone—excluding manufacturing and research facilities?

"Economic depreciation" was accepted for the first time in one of your subsidiary rate cases; does this give any hope for acceptance of this theory in other areas?

Referring to average telephone messages per day as shown in prospectus, could a similar trend be expected in the future?

Regarding the addition of new telephones, is an increasing cost basis expected to continue?

Time and Place Important

At this juncture, perhaps some remarks on the setting of the due diligence meeting will be of interest. The customary procedure is to let it be known in the public invitation for proposals for purchase of new securities that officers and

representatives of the company and counsel for the company will be available at an established place and at a set time (preferably not the luncheon hour or very late in the business day) to meet with prospective bidders for the purpose of reviewing with them the information with respect to the company contained in the registration statement and prospectus. The average due diligence meeting will gather from fifty to sixty persons and, as we have said before, will, if effective, last about an hour or slightly longer.

Where such meetings are held in the New York financial community (and the bulk of them are) often suitable quarters, and some able assistance, will be provided by one of the company's commercial banks or service organizations; in some cases meeting rooms have been secured at private clubs, including such prominent locations as the New York Chamber of Commerce. Whatever site is selected, of course, it should be easily accessible to the financial community at large, particularly in a competitive undertaking, where as broad a representation as possible is desirable. Ordinarily, a similar procedure is followed in connection with a negotiated offering, except that the meeting may be held in the offices of the managing underwriter and invitations are sent out to directly interested parties.

COLLATERAL to certain problems that have arisen under SEC determinations of the last year or so in connection with earnings projections at due diligence meetings (also to be discussed later), a variation in the accustomed type of meeting has developed. In this less frequently used approach an entire business day is set aside, and so advertised in the public invitation, for random conferences with prospective bidders and other interested parties, for review of the registration

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statement and prospectus. Company officials are available throughout the day and visitors attend and leave at will. This type of meeting does allow considerably more time for individual questions and a generally more personal "modus operandi."

Yet, it has been found that the analyst fraternity for the most part will not attend. Whether it is the element of group dynamics that promotes the success of the regular due diligence meeting, and accordingly the lack of it which retards the effectiveness of the "all day" meeting, is open to question. In any event, the latter type will not do full justice to the opportunity the company has, to do a truly good investor cultivation job in selling its securities and itself.

Some Legal Aspects

OUR purpose thus far has been to present ideas which may be helpful to utility managements in their approach to the due diligence meeting. Since much of the data represent careful gleaning of a great many of these meetings, no attempt will be made here at a material discussion of what is or is not legal under the Securities Act of 1933. However, there are certain legal aspects which merit comment in their pertinence to the basic importance of the meeting and to present-day problems regarding earnings forecasts.

There is no requirement that a company hold an "information" or "due diligence" meeting. Such meetings evolved as important aids in carrying out the basic "disclosure" principle of the Securities Act of 1933, and in limiting the liabilities imposed thereunder. The preamble of the act makes the following statement:

To provide full and fair disclosure of the character of securities sold in inter-

state and foreign commerce and through the mails, and to prevent frauds in the sale thereof, and for other purposes. (Emphasis added.)

THE act provides an all-inclusive list of civil liabilities arising out of failure to meet the requirements set forth for the proper achievement of its full and fair disclosure objective. Section 11 (a), pertaining to civil liabilities on account of false registration statement, declares:

In case any part of the registration statement, when such part became effective, contained an untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary to make the statements therein not misleading, any person acquiring such security unless it is proved that at the time of such acquisition he knew of such untruth or omission may, either at law or in equity, in any court of competent jurisdiction, sue—

(1) every person who signed the registration statement . . .

(5) every underwriter with respect to such security. (Emphasis added.)

Review of a number of cases arising under the act indicates further that the issuer (the company) is pretty much a guarantor of the accuracy of the registration statement for a new security issue. His defenses under the act are limited to (a) proof that a buyer of the security was aware at the time of purchase of a material untruth or omission, and (b) a reduction of damages sustained by the purchaser by proving they were not caused by a material untruth or omission in the registration statement. Persons other than the issuer apparently have several defenses, but for our purposes, we note §11 (b) (3) of the act providing

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that (A) as regards any part of the registration statement not purporting to be made on the authority of an expert and not purporting to be a copy of an extract from a report or valuation of an expert, and not purporting to be made on the authority of a public document or statement, he (the defendant) had, after reasonable investigation, reasonable ground to believe at the time such registration statement became effective, that the statements therein were true and there was no omission to state a material fact required to be stated therein or necessary to make the statements therein not misleading, etc.

Indeed, within the intent of the preamble of the 1933 act and especially within §§ 11 and 12 we can ascertain a manifold prescription for what we have come to know as the "due diligence" or "information" meeting. The many exhortations throughout the 1933 act toward reasonable investigation and reasonable diligence in connection with registration statements, prospectuses, and attendant communications clearly emphasize the material function such meetings serve, beyond the vitally important investor relations goal.

Earnings Projections

As a final point, special note must be taken of the matter of earnings projections at due diligence meetings. We understand that when the meeting is attended by *prospective underwriters alone*, future earnings estimates may be given, provided they are not to be subsequently used as a part of a selling effort to the public. At the usual "open" meeting, however, where the audience is not restricted to prospective underwriters, any discussion of future earnings appears to be objectionable to the SEC.

Since so many due diligence meetings are of this "open" type, the question has

become highly controversial, with many analysts ardently supporting the view that intelligent earnings estimates represent important and material information, and with the SEC on the other hand fearful of the element of "sales puffing" possible in the use of such projections. We know that the 1933 act provides that no misleading or factually incorrect statements, or material omissions, will be permitted in regard to the new security offering, but this is about as far as the law goes. The interpretation and application of the law, however, are in the hands of the SEC and this commission has gone considerably further in imposing restrictions as to what a company may, or may not, say.



It is an investment truism, for example, that the investment value of a common stock is essentially dependent upon the future earnings of the company. And yet the SEC has in recent years displayed an increasing sensitivity toward the dissemination of estimates of prospective earnings. In an address by SEC Commissioner Andrew Orrick on July 17, 1957, before the Security Analysts of San Francisco, the commission's philosophy in the matter of projected earnings was spelled out as follows:

Prediction of dollar amounts of profits or projections of earnings are particularly objectionable, since these types of estimates usually are of a character which could not be made under the disclosure standards of the act. These types of statements are objected to when included in prospectuses on the ground that they involve too many unknowns to be factual in nature.

Apparently the only exception in which a utility registration statement has been permitted to include earnings forecasts has been the case of a gas transmission

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company, where both the supply of gas and its resale were covered by firm contracts. (For additional examples of the commission's sensitivity in this field, it is suggested that Securities Act Release No. 3844, dated October 8, 1957, be given careful study.) As a result of this growing stringency, warranted or not, rarely is an attempt made to include in a registration statement or prospectus any projection of future profits, since there is a strong probability that so much explanatory and "hedge" material would be required as to render the projection unfeasible. The question arises then whether a disclosure of this type at a "due diligence" meeting would subsequently require a time-consuming and involved amendment to the prospectus in order to prevent a "material omission."

IT is interesting to recall in connection with a convertible debenture offering of Niagara Mohawk Power in January, 1957, that the president of the company undertook to estimate future earnings in response to a question at a due diligence meeting. Subsequently, a press representative, apparently present in the group, published an account of the meeting, which came to the immediate attention of the SEC. The commission, in turn, took exception to the president's "earnings" remarks and, before permitting the registration statement to become effective, required a statement to be run on the Dow-Jones ticker and published in *The Wall Street Journal*, to the effect that the estimates were "subject to economic and other factors not presently foreseeable. . . . (which) would make reliable predictions for future sales or net income impossible."

While there have not been many recent extreme cases such as this, particu-

larly among utilities, there seems to be little uniformity as to when such a result will occur. Unquestionably any company will wish to avoid unnatural delays in the midst of its financing and it follows logically that, if any talk of an expectable rate of future earnings is to be entertained at a due diligence meeting, it be couched in sufficiently protective language and factually supportive data.

IT must be recognized, however, that the "prospective earnings" question will be raised and a course of response might best be anticipated prior to the meeting. Many companies still supply carefully made estimates without encountering SEC censure, but a growing number decline to discuss future profits, especially if the security being offered is common stock. It seems a fair question whether the commission stringency as to soundly developed estimates of this type is necessary in the case of regulated utilities, particularly since the nature of their operations virtually precludes the possibility of unusual or speculative profits which might provide the basis for "puffing statements." Future earnings are what the common stock investor is, in fact, buying and it seems anomalous to prohibit the company's management from discussing this outlook at the time of seeking equity capital.

Apart from this, the due diligence meeting offers the utility company a unique opportunity to tell its story to investors, at the crucial time when it is asking them to furnish capital to the business. A good story, well told, will mean a better reception for the securities being offered and will contribute importantly to favorable investor relations.

—FENTON L. B. BROWN,
New York, New York.



The March of Events

AEC OK's Reactor Site

A NEW site in Piqua, Ohio, has been approved by the Atomic Energy Commission for the construction of an organic-moderated and -cooled-atomic reactor. The plant, however, will have to provide an additional external container as a safeguard against a possible accident which would release radioactivity.

Last May an agreement had been reached between Piqua and Atomics International on a contract for building the plant. The city of Piqua was to provide the site and conventional turbogenerator, operate the plant for five years, and purchase the steam produced by the reactor from the commission. Atomics International was to do the research and development, fabrication, and construction of the 11,400-kilowatt reactor. The first site for the plant suggested was turned down after study.

The AEC is of the belief that this Piqua atomic plant, using the organic-moderated reactor concept, has good pos-

sibilities for achieving economic nuclear power, so construction will begin since the site is now considered acceptable.

AEC Reactor Goes Critical

THE Transient Reactor Test Facility (TREAT), a reactor which was designed to investigate the effect of extreme nuclear heat upon fast reactor fuel elements, achieved criticality recently at the Atomic Energy Commission's National Reactor Testing Station, Idaho Falls, Idaho. The reactor, which was designed by the Argonne National Laboratory, can deliver a high-intensity, short-duration surge of nuclear energy without damage to the facility itself. This unusual action will prove helpful in stimulating abnormal reactor operating conditions and will permit reactor designers to observe on a small scale the effect of such conditions on prototype fuel elements planned for fast reactors.

Cost of the facility is estimated at about \$1 million.

California

Opposes Gas Sale

THE Southern Counties Gas Company has complained to the California commission over the proposed sale of low-rate gas exclusively as boiler fuel by the

Mandalay steam-electric generating plant of the Southern California Edison Company. The gas used would be supplied by Richfield Oil Corporation, which Southern Counties Gas Company thinks ought

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to be required to obtain a certificate before constructing a gas transmission line.

Southern Counties' argument against the sale of gas for boiler fuel exclusively is that it would have a detrimental effect on the supply and cost of gas to its customers in the central and southern parts of California.

Seeks PUC Gas Storage OK

PACIFIC GAS AND ELECTRIC COMPANY has plans to spend more than \$2.5 million to store natural gas underground in the partially depleted Pleasant Creek field

District of Emergency Rate Backed

THE chief accountant of the District of Columbia Public Utilities Commission has recommended that the Potomac Electric Power Company be allowed to increase its rates 6.95 per cent on an emergency basis. If the commission approves this staff report, the increase (prematurely reported as approved in PUBLIC UTILITIES FORTNIGHTLY of February 26th) would become effective on order of the commission.

The staff official, J. William Falk, made his recommendation at a hearing on the electric company's claim that a minimum increase is needed immediately and that another unspecified increase will be requested next fall. Mr. Falk did not agree,

Utilities Ad Bill Dies

ABILL designed to prohibit Nebraska's publicly owned utilities from spending money for any promotion other than so-called institutional safety advertising was killed by the legislature's public works committee. Previously it had heard two hours of testimony opposing the measure

near Winters. It has asked the state public utilities commission for permission to go ahead with the project, which would provide for storage of 3,250,000,000 cubic feet of gas.

The company has been getting an increasing proportion of its gas from out of state ever since 1950. And a PG&E spokesman pointed out that gas from long transmission lines must be taken at a steady rate in order to get the lowest price. By providing the Pleasant Creek gas storage, the steady supply of gas can be taken and used as needed to meet the fluctuations in customer demand.

Columbia

however, that there would be justification for a second boost next fall or that the proposed increase actually constituted an emergency requirement.

The General Services Administration, which is the utility company's largest commercial consumer (caring as it does for the electric power supply requirements of all the federal buildings in the District of Columbia and metropolitan Washington), opposed the increase.

The company said it is now getting a 5.22 per cent return on capital investment and that the emergency rise as requested would boost the return to only 5.85 per cent. This is the amount of return which the commission found justified when the company's rates were last increased in 1955.

Nebraska

which had been authored by Senator George Syas of Omaha, who was also the bill's sole defender. The senator admitted he expected the committee to kill the bill because of opposition of the public power districts.

Among those against the proposed legislation were representatives of the ad-

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vertising profession, the Nebraska Press Association, and the Nebraska Broadcasters Association, as well as important officials of the various power districts. They contended that advertising is essential to the running of any businesslike op-

eration and that the electric utilities are subject to competition of private gas companies. Only through continued expansion promoted by advertising, they maintained, can the cost of utilities' benefits to the public be kept low.

New York

Utility Bill Stymied

A BILL that would require the continuation of conjunctural billing, a system which Consolidated Edison had petitioned the public service commission for permission to abandon, was blocked from getting out of committee by the Republicans in the legislature. Fifty-four Democrats voted to put the measure on the floor, but the Republican majority in the legislature's lower house, ninety-one, voted

unanimously to retain the bill in committee.

Conjunctural billing is a system under which a utility charges lower rates to the owner or operator of a group of adjacent buildings. It is a type of discount for quantity purchase. Consolidated Edison wishes to end this practice and bill individual customers at the regular higher rates. The case has been pending before the commission for twenty months.

Ohio

New Utility Board Proposed

A BILL to reduce the power of the state public utility commission was introduced in the state legislature recently with the backing of Governor DiSalle. The proposed legislation would transfer all the administrative power of the commission to a new director of public utilities, who would be a member of the governor's cabinet.

DiSalle said this director would represent "what is best in the public interest" in matters concerning public utility firms. "He would be neither proutility nor anti-utility," the governor said. The director would be in charge of state regulations on all trucking concerns and railroads in addition to telephone, gas, electric, and water companies. He would be paid at the level of other cabinet officers, about \$15,000 a year.

All applications now made to the commission would be made to the department, which would have the power to issue the

same orders as the state commission. The commission would become a review board to oversee the actions of the department. Appeals could be taken to the board if a firm did not accept an action by the director. If the board overruled the director, he could appeal its decision to the courts for final adjudication.

The board would continue to comprise three members, each earning \$16,000 a year, according to the governor, who said putting the responsibility for utility affairs in the hands of a director responsible to the governor would help the state co-ordinate its efforts in economic development.

Another bill, also backed by the governor, would halt the state tax on public utility bills and permit counties to make this levy and turn over administration of poor relief to the sole jurisdiction of counties. DiSalle pointed out that the state now collects the utility taxes and turns them right back to the counties for relief purposes.



Progress of Regulation

Trends and Topics

Relation of Return to Rate Base and Other Factors

ARATE of return, standing by itself, can be deceptive. A person unaccustomed to viewing the return allowed a utility in the light of the rate base to which it is coupled, might conclude that a return of 4.74 per cent is unreasonably low, but that a return of 6.75 per cent is more within the zone of reasonableness. Yet, in fixing telephone rates, the Nebraska commission considered both returns reasonable, the former on the company's current value rate base and the latter on the original cost rate base. *Re General Teleph. Co. of Nebraska*, Application No. 21504, February 4, 1959.

The interrelationship of rate of return and rate base is discussed in *PUBLIC UTILITIES FORTNIGHTLY*, February 2, 1956, at page 201. The subject is treated definitively in "Rate of Return," at page 408. Ellsworth Nichols, the author, cites *City of Pekin v. Pekin Waterworks Co.* (1917C 838, 858), where the Illinois commission said that as far as it affects the ultimate rates there is little difference between a low rate of return upon a high valuation, and a high rate of return on a greatly depreciated present value.

The California commission, in the Southern California Telephone Company case (PUR1925C 627, 675), commented that a lower rate of return would be reasonable if a large assumed value, including construction work in progress, were used as the rate base, or if a cost new were used and depreciation determined on the straight-line basis, than if the historical cost of the used and useful property were accepted as the rate base and the depreciation determined on the sinking-fund basis.

And in the Western New York Water Company case (97 PUR NS 428), it was noted that if the public service commission, in certifying the return and rate base of a public utility under § 5(2) of the Condemnation Law, starts with a predetermined rate of return, the end result will be different, depending upon whether the commission takes the company's investment in the property, its so-called fair value, or its reproduction cost new. A just result can be obtained

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using any theory as to the proper determination of a rate base provided the rate of return upon the property is correspondingly adjusted.

Recognition of Dual Returns

There is an increasing tendency on the part of regulatory commissioners to recognize dual return-rate base relationships, particularly in states which are not bound by statute to one specific measure of value. It is not at all unusual to find commissions approving two or more returns in one case, each linked to a different rate base. A few examples will suffice. The Missouri commission, in Consolidated Water Corporation, Case No. 14,001, January 14, 1959, approved a return of 6.26 per cent on the company's net original cost rate base and 3.62 per cent on a reproduction cost new less depreciation rate base. In the Southern Bell Telephone & Telegraph Company case (6 PUR3d 18), the Kentucky commission approved increased rates which would produce, subsequently, a return in the neighborhood of 6 per cent on net investment, or 4.6 per cent on current costs.

The Nebraska commission, in the Northwestern Bell Telephone Company case (5 PUR3d 24), approved returns ranging from 4.44 per cent to 6.27 per cent, on various rate bases submitted. The 5.97 per cent return was coupled to a rate base which included intrastate book cost of plant and equipment (including telephone plant under construction and property held for future use), plus an allowance for materials and supplies and working capital, less the depreciation reserve applicable to intrastate operations. The 4.44 per cent return was tied to a replacement cost rate base. The 6.05 per cent return and 6.27 per cent return were variations of the above.

The Missouri commission, in the Empire District Electric Company case (22 PUR3d 399), approved a return of 6.39 per cent on a depreciated original cost rate base, or 3.69 per cent on a trended cost rate base. Neither was considered excessive.

Attrition and End-of-period Figures

There are other factors in an approved rate of return which can be misleading if the return per se is used as a criterion of reasonableness. One such factor is an increment added to the return to compensate for attrition produced by economic factors or updating of plant and properties. The subject is discussed in PUBLIC UTILITIES FORTNIGHTLY, April 24, 1958, at page 633.

As an alternative to an attrition increment, some commissions are using end-of-period figures instead of average figures, and some are doing both. The Wisconsin commission, in the Wisconsin Telephone Company case (23 PUR3d 388), allowed for an estimated decrease in rate of return of about 0.19 per cent by reason of attrition during the latter half of the coming year, in fixing a rate of return for a telephone company. A return of 6.1 per cent based on a net book investment rate base as of the end of the current year was deemed reasonable, such return being equivalent to 6.29 per cent as of the middle of the current year.

In the Quincy Telephone Company case (10 PUR3d 60), the Florida com-

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mission considered a return of 7 per cent on a year-end rate base reasonable despite the fact that a return of 8 per cent on the company's average investment had been deemed reasonable in a prior case. The commission pointed out that previous findings that the company was entitled to earn a return of 8 per cent on the average investment, less depreciation, did not mean that the same utility was entitled to earn a return of 8 per cent on the year-end rate base.

The California commission, in the Southern California Gas Company case (21 PUR3d 1), authorized increased revenues which would produce a return of 7.25 per cent on the adopted results for the test year, but which would decline to 6.75 per cent in the immediate future owing to inflation, constant population increases, and new plant facilities to be put in operation during the full first year after the rate increase. The same commission, in the Southern California Edison Company case (21 PUR3d 15), authorized a return of 6.37 per cent on the company's depreciated book cost rate base, which included an attrition offset factor of 0.12 per cent, so that a return of 6.25 per cent might be earned.

The Utah commission, in the Mountain States Telephone & Telegraph Company case (2 PUR3d 75), approved telephone rates for which a return of 6 per cent was deemed reasonable, allowing 6.5 per cent to enable the company to earn a reasonable return in the future after completion of an extensive construction program currently in progress.

Review of Current Cases

Reasonable Value Not Midway Point between Original And Reproduction Cost

THE Kansas commission allowed a telephone company increased rates which would produce a return of 7.243 per cent on a year-end cost rate base. The commission considered the return within the zone of reasonableness.

The company had presented a rate base labeled "reasonable value less depreciation," arrived at by arbitrarily averaging book cost less depreciation and replacement cost less depreciation to arrive at a "hybrid." It contended that the words "reasonable value," as used in a statute authorizing the commission to ascertain reasonable value whenever it deems such ascertainment necessary in order to fix fair and reasonable rates, permitted the use of such a rate base.

The commission did not agree. Legislative use of the words "reasonable value," said the commission, does not mean a figure halfway between original and replacement cost. Replacement cost is a highly hypothetical factor. The company's practice of trending original labor and material costs to present-day values to arrive at reproduction cost did not take into consideration the fact that if the plant were reproduced today it would not be built in the same manner it was originally built. Different materials and equipment would be used and different methods would be employed. For example, when some of the plant was built, the holes for the poles were dug by hand. Today, those holes would be dug more efficiently by machine.

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The statutory language was construed as not imposing a mandate upon the commission to determine reasonable value in every rate case. If original cost is determinable, a determination of reasonable value is not necessary.

Test Period

The objective of a test period, pointed out the commission, is to reflect typical operating conditions as a basis for the determination of reasonable rates. The commission had consistently followed the practice of testing rates for the future upon the basis of actual operating experience of a representative period of time, adjusting that experience for changes which appeared definite and certain, thereby eliminating prophecy which is generally a poor substitute for experience. The latest 12-month period of operations, said the commission, embraces a full year and eliminates seasonal fluctuations which often exist in a shorter period.

The company had submitted operations for the first seven months with estimates for the last five months of the year 1957 and, at the hearing, had presented the operations for the first three months of 1958 with estimates for the last nine months. The commission adhered to its previous stand, with the comment that estimates and prophecies, even when honestly presented, are not as reliable as actual operating experience.

Ad Valorem Taxes

Estimated ad valorem taxes due to nondial additions were excluded from operating expense inasmuch as the increased revenues to be derived from such additions were not annualized. However, since increased revenues to be derived from dial conversions were annualized, the estimated ad valorem taxes for such conversions were included.

Wage Progressions

The company had proposed that operating expenses be adjusted for wage progressions estimated to become effective during the year following the test year. The commission noted that items like wage progressions are speculative, since the amount is determined by the employees who stay with the company and the employees who terminate their employment. No evidence had been presented as to the number of employees who might be expected to remain or the number who might be expected to terminate their employment. The wage progressions during the test year were reflected in the test year, and to adjust for estimated progressions in the following year would include two sets of wage progressions in the test period.

Affiliate Interest

A corporate affiliate, which was not a regulated utility, was selling materials and equipment to the company. The inter-corporate relationship, said the commission, gives opportunity for unregulated profit taking, indirectly increasing the burden on ratepayers. A statute had been enacted for the purpose of enabling the commission to determine whether a utility's investment, rate base, or operating expenses had been inflated by charges by affiliates which included unreasonable profits to such affiliates, so that the commission could disallow the unreasonable part.

The evidence showed that the corporate affiliate earned 26.88 per cent on its equity capital during 1957. A return of 12 per cent would have been reasonable, held the commission, disallowing the amount of return above 12 per cent on the business the utility did with the corporate affiliate and crediting the utility with that amount of income.

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Franchise Taxes

The commission was of the opinion that a municipal franchise tax charged as a general expense results in discrimination to other cities and to rural areas which either have no tax or a lesser tax. The commission approved a new tariff filed by the company which permitted the company to place the burden of the franchise taxes upon the respective subscribers who receive the benefits therefrom and thus eliminate the unjust discrimination which had existed.

Plant Acquisition Adjustment

At the end of the test year, the company had a credit balance in its plant acquisition adjustment account, made up of several acquisitions carrying both debit and credit balances. At the time a debit balance had been created by the acquisition of property, the commission, in another order, had made provisions for amortizing the debit balance over a period of years, and the company had followed the order.

Subsequent property acquisitions had, however, resulted in a credit balance which exceeded the prior debit balance. In the

later acquisitions, the commission had been silent as to the amortization, with the result that the company was presently creating a credit balance reserve on a credit balance account. The commission directed that the net credit balance of the plant acquisition adjustment account, along with the credit balance in the reserve for amortization of the account, be transferred to the surplus account and that further amortizations of the debit balance cease.

Working Capital

No allowance for cash working capital was included. Customer funds were available to use as working capital for the exchange service portion of the operation, and though toll revenues were billed in arrears, tax accruals substantially exceeded the allowance necessary for the toll portion of the operation. Prepaid operating expenses and special deposits consisting primarily of insurance deposits were held proper items to be considered as working capital. *Re United Teleph. Co. of Kansas, Inc. Docket No. 56,246-U, December 4, 1958.*



Tuscaroras Hold Ground against Niagara Falls Power Project

THE Federal Power Commission has given further consideration to its order licensing a Niagara Falls power project, pursuant to a federal court of appeals remand order. The court directed the commission to determine, under § 4(e) of the Federal Power Act, whether the license, which would involve the inundation of 22 per cent of the lands of the Tuscarora Indian nation, would be inconsistent with the purpose for which the Indian reservation was created.

After taking additional evidence, the commission came to the conclusion that

the license would be inconsistent with that purpose.

The commission then considered it immaterial that contiguous lands were available to Indians who would be displaced by the proposed reservoir. It was recognized that this finding would result in a higher cost of electricity to be generated by this project, and that in the event other lands could not be substituted as a reservoir site, the project would not be best adapted to the comprehensive development of the Niagara river for power and other purposes.

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Dissent Urges "Common Sense"

Commissioners Connole and Stueck, dissenting, observed that the \$700 million project was at the brink of disaster. They urged a finding by the commission that the licensing of the project would be consistent with the purpose of the reservation. "And the pity is," said the commissioners, "the finding not only can and in common sense should be made, it is legally compelling that such a finding be made."

In allowing the commission under § 4(e) of the Federal Power Act to deal with "public lands and reservations," Congress was exercising not only its power under the property clause of the Constitution but also its power to regulate commerce with the Indian tribes and, therefore, to allow alienation of such land, the commissioners noted. Thus, alienation of part of a reservation subject to § 4(e) is not *per se* inconsistent with the purposes for which the reservation was created. Its fundamental purpose, said the commissioners, was to assure a peaceful, reasonably comfortable, and secure life for the tribes. The use of the land is a means to that end.

The commission, they observed, should inquire not simply whether the license will

deprive the Indians of land. It must inquire whether the license, in its totality, will be inconsistent with the assurance to the Indians of a peaceful, reasonably comfortable, and secure life. It was pointed out that the proviso in § 4(e) also directs that the license "shall be subject to and contain such conditions as the Secretary of the department under whose supervision such reservation falls shall deem necessary for the adequate protection and utilization of such reservation."

Opportunity to Advance Indians

Contiguous lands can be purchased for the displaced Indians, and by the terms of the offers made by the New York Power Authority, substantial improvements would be made on the Indians' remaining lands. Appropriate conditions could be attached to the license to assure to the Tuscarora nation the continuation of its way of life. "In fact," said the dissenting commissioners, "this proposed purchase of land brings to the Tuscarora an unprecedented opportunity to advance whatever way of life they had been following." *Re Power Authority of the State of New York, Opinion No. 317, Project No. 2216, February 2, 1959.*



Telephone Rate Increase Takes Account of Interest on Deferred Tax Reserve

THE California commission granted only about 38 per cent of a telephone rate increase requested by California Water & Telephone Company for local exchange and intracompany toll service. The proposed increase would have raised estimated 1958 revenues by approximately 12 per cent. The company provides telephone service in four districts: Monrovia, San Fernando, Redlands, and Palm Springs. In the service area of 2,400 miles,

it serves more than 133,000 stations. Most of its revenues are derived from telephone operations.

Accelerated Depreciation Taxes

The company had accumulated a deferred federal income tax reserve as a result of having taken accelerated depreciation from 1954 to 1956. A question arose as to what tax treatment should be accorded accelerated depreciation for rate-

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making purposes. Pending final determination of this question in a separate proceeding then under consideration, the commission determined the company's tax expense for the test year after crediting to the income tax account interest calculated on the tax reserve at the rate of return allowed on the rate base.

Future wage increases to which the company was committed were allowed as operating expenses. Also allowed was an increase in social security taxes which would become effective immediately after the test year. A depreciation expense rate of 15 per cent for station connections was recognized.

No Allowance for Attrition

Citing wage and other cost increases, the company alleged that the rate of return for 1958 under existing rates would decline to 5.40 per cent based on a depreciated original cost rate base. On this estimate the staff disagreed, asserting that the 1958 return would be about 6.15 per cent. The company sought a 7 per cent rate of return. New rates authorized to be filed will afford a rate of return of 6.25 per cent on a depreciated original cost rate base.

No extra allowance in the rate of return was made for attrition although the com-

pany requested it. The commission pointed out that it had allowed for the major items that cause attrition and could find no reason for granting any extra allowance. Wage increases effective late in the test year were allowed, and by using an estimated year in advance, rather than a past year as a test period, full weight was given to higher unit plant costs.

Two of the company's districts afforded a rate of return in excess of the average return for the system, with one earning over 8 per cent. Two other districts were below the average. Rate increases were nevertheless granted for all districts, though the increases allowed in the high-return districts were lower, percentage-wise, than in the low-return districts.

In view of a substantial number of complaints of service deficiencies, increases in residence rates were held to a minimum, with no increases in residence four-party and suburban grades of service. The commission rejected the company's view that inadequate service must result from inadequate earnings. Insufficient past earnings and inadequate financing are no excuse, said the commission. A public utility's first obligation is to supply adequate service. *Re California Water & Teleph. Co. Decision No. 57892, Application No. 38685, January 20, 1959.*



Commission Allows Charitable Contributions

THE Wyoming commission, although aware that other commissions had reached divergent views with respect to allowing charitable contributions as an operating expense in the establishment of reasonable rates, authorized the inclusion of such expenditures by a telephone company. The company had contended that it was obligated as a citizen in the respective communities to carry its share of the contributions to such charitable institutions

as the Community Chest, Red Cross, Heart Association, TB Association.

Return and Rate Base

The company had requested increased rates which would allow it to earn a return of 8.83 per cent on a net investment rate base. The commission considered this altogether too much, but in view of the increased cost of capital, particularly debt capital, it allowed the company a 6.75 per

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cent return on a year-end net investment rate base, which was slightly higher than the return authorized by a previous order.

The company had contended that the straight-line method of depreciation accounting on original cost operated unfairly to owners of businesses during a period of inflation. The dollars which it recovered through depreciation accruals had less purchasing power than those originally invested in properties. Thus, by adhering to straight-line depreciation, the owner of a business suffers a loss of capital.

Since the commission had decided against the use of a current cost rate base,

although it had intimated that it might be necessary at some future date to give recognition to the declining purchasing power of the dollar in establishing a base for fixing rates, it followed that the commission would not allow depreciation expense expressed in current dollars. However, in order to compensate for the declining tendency of the return allowance, the commission used the year-end rate base instead of an average rate base, and allowed a return something more than the bare cost of capital. *Re Mountain States Teleph. & Teleg. Co. Docket No. 9343, February 5, 1959.*



Approval of Sale of Water Company Upheld

THE Connecticut supreme court upheld a commission order approving the sale of a water company's stock to a holding company despite contentions of the city of Rockville that the primary purpose of the transaction was to provide an additional source of water supply for another operating water company. The commission had approved the sale, however, upon findings that it would not adversely affect the public interest and might improve the utility service rendered by the water company.

On ample evidence it had found that the

sale would not interfere with an abundant water supply for users in the franchise area in the foreseeable future, and that the sale would discourage waste and promote the judicious use of water without detriment to the franchise area.

The court indicated that the only question before it was whether the commission acted illegally or in excess of its powers. A lower court judgment dismissing an appeal from the commission's determination was affirmed. *City of Rockville v. Connecticut Pub. Utilities Commission et al. 146 A2d 916.*



Municipal Regulation of Gas Rates under Franchise

THE supreme court of Nebraska held that a franchise for the sale of gas, granted by a city of the second class which subsequently became a city of the first class, to a public service corporation was made with the right of regulation of gas rates a part of the contract. It so ruled in reversing and remanding a judgment overruling a gas company's motion for a new trial in an action to obtain a judgment

enjoining a municipality from preventing the company from putting new rates into effect for sale of gas to city customers.

The company claimed that when it applied to the city authorities for a rate increase they refused either to consider the request or to grant the relief requested. The franchise in question fixed the amount that might be charged for gas service in the city and also provided that the city

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might make any reasonable regulation with reference to the franchise holder either as to charges for gas service or otherwise.

The court pointed out that under statute all ordinances, bylaws, acts, regulations, rules, and proclamations, existing and in

force in any city at the time of its incorporation as a city of the first class, shall remain in full force and effect after such incorporation until the same are repealed or modified by the city. *Nebraska Nat. Gas Co. v. City of Lexington*, 93 NW2d 179.



Fifteen Days' Suspension

THE California commission suspended a radial highway common carrier's operating authority for fifteen consecutive days, and directed the company to collect certain undercharges. The company had violated the commission's applicable minimum rates by charging and collecting a lesser compensation for the transportation of lumber.

The commission pointed out that, although it might personally sympathize with the carrier's financial distress, it

could not and would not condone a flagrant violation of law. As in criminal courts, the commission said, it is no excuse for the defendant to say "Everybody else is doing it." The defendant takes a calculated risk that he will not be caught. The carrier took such a risk and lost.

The commission felt it would be derelict in its duty if lenient treatment were given the carrier in this case. *Re Beck, Decision No. 57957, Case No. 6035, February 3, 1959.*



Failure to Obtain Commission Approval before Condemnation Raises Issue of Good Faith

THE Georgia court of appeals reversed a judgment dismissing an action to enjoin a railroad from condemning certain land, and for recovery of attorney's fees. The underlying question was whether the facts showed bad faith on the part of the railroad company.

Indicative of whether a party acts in good or bad faith, pointed out the court, is his abiding by or failing to comply with a public law made for the benefit of the opposite party, or enacted for the protection of the latter's legal rights.

A statute conferring upon railroads the power to condemn property for depot sites requires railroads to first procure the permission of the commission before proceeding with condemnation. This is for the

protection of the owner's rights and is a valuable safeguard against property being improvidently taken.

When the railroad undertook to take the plaintiff's property without complying with the mandate of the statute, it amounted to an attempt to take the property without due process of law. From this fact, coupled with allegations that for designated reasons the railroad should condemn other property rather than that of the plaintiffs, the court concluded that an issue as to whether the railroad had acted in good faith in instituting and carrying on the condemnation proceedings had been raised. The fact that after being enjoined from proceeding with the condemnation, and confronted with its failure

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to comply with the statute, the railroad had dismissed the proceedings was held

not conclusive of good faith. *Pickett et al. v. Georgia, F. & A. R. Co.* 106 SE2d 285.



Stockholders' Action against Holding Company and Subsidiary Directors Stayed Pending Simplification Proceeding

THE court of chancery of Delaware has stayed a minority stockholders' derivative suit on behalf of a subsidiary corporation against its parent company and directors of the subsidiary pending completion of comprehensive hearings before the Securities and Exchange Commission on a holding company simplification plan involving the same companies and issues. The stockholders' action involved the sole issue of good faith of the subsidiary corporation's directors or the right of stockholders to an accounting with respect to certain transactions between Arkansas Fuel Oil Corporation and its subsidiaries on the one hand and Cities Service Company and its other subsidiaries on the other hand.

The court believed that the commission proceeding would not only effectuate the broad public purposes envisaged by Con-

gress in enacting the Public Utility Holding Company Act, but would also incidentally dispose of the derivative claims asserted by the stockholders. In fact, the court believed that the claims made by the stockholders, which were not personal but derivative, might more appropriately be considered and determined in the scheduled commission hearing.

The court based its stay order upon the theory that comity and common sense require private litigants to stand aside when a federal commission, in carrying out the broad purposes of the Holding Company Act under congressional mandate, proposes to hear the facts in support of derivative claims as an incident to determining the fairness of a comprehensive holding company simplification plan. *Auerbach v. Cities Service Co. et al.* 145 A2d 394.



Passenger Trains Must Be Continued

UPON reconsideration and rehearing following remand by a reviewing court, the Missouri commission again declined to permit the Chicago, Rock Island & Pacific Railroad Company to discontinue two passenger trains operating between Kansas City and Eldon. In deciding whether there is a public need for the passenger train service sought to be discontinued, an important factor to be considered is whether the railroad may be heard to complain that the public is not using such service when it permits or allows its facilities to become outmoded and expensive to operate, uses very little pro-

motional activity to get passengers, makes no effort to reduce unnecessary crews, and fails to use economical equipment in its operation.

Evidence of Public Need

An appreciable gain in train passengers in the current year, despite outmoded equipment, unattractive schedules, and lack of promotional activity, was regarded as demonstrative of a public need for passenger service. More importantly, it was found that the public would not otherwise be adequately served by public transportation on the routes involved. Finding, also,

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that out-of-pocket losses on the two trains were not patently disproportionate to the public need for service, that considerable savings in operating expenses could be achieved, and that the company earned a

return of 2.75 per cent on system-wide operations, the commission was unable to authorize discontinuance of service. *Re Chicago, R. I. & P. R. Co. Case No. 13-386, December 29, 1958.*



Commission Regulation Extends to Municipal Service beyond City Limits

THE Kentucky court of appeals ruled that the state commission has jurisdiction over charges imposed by a municipally owned water company for the installation of service facilities outside the city. The company argued against commission jurisdiction on the ground that municipally owned utilities are exempt by statute from regulation by the commission and that the commission has authority only to regulate rates and service, while charges for the installation of pipe extensions and other facilities in this case did not concern rates or service but merely facilities. The court rejected these views.

Although municipally owned utilities are in fact exempt from commission regulation, the exemption does not extend to the furnishing of service outside the limits of the city, and the commission has authority to regulate rates and service to outside customers, said the court. The legislature did not intend to exempt outside service by reason of a statute authorizing municipal companies to furnish service within a 5-mile radius of the municipal boundary. Residents of a city have some means of protection against excessive rates or inadequate service, through their voting power. But customers outside the city have no such protection, and unless their interests are protected by the commission, they are at the utility's mercy.

The court found "wholly unacceptable" the contention that the issue in this case was a matter of charges for facilities and

not rates and service subject to the commission's jurisdiction. It was held that such charges involve the regulation of rates and service.

Contractual Basis Rejected

It was also contended that since the water company had no duty or obligation to serve customers outside the city, any relation between the company and complaining builders and other customers must be considered as strictly contractual. The court called this a specious argument. If the rates and service of a utility are subject to regulation by the commission, it is beyond question that the utility cannot by contract abrogate that regulatory power.

Burden of Cost

Finally, the company argued that it could not install facilities outside the city limits except at the expense of the customers, so that the regulations of the commission prohibiting the charging of such expense to the customer were invalid. While the commission had largely accepted this view, the court rejected it. Since the company was expressly authorized to extend service within a 5-mile radius beyond the city limits, it must have authority to incur the expense of installing facilities to provide such service. Beyond the 5-mile area, however, it must look to the customer to sustain the expense of installing facilities. *Louisville Water Co. v. Kentucky Pub. Service Commission et al. 318 SW2d 537.*

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Municipal Plant Rate Differential for Residents and Nonresidents

THE Texas court of civil appeals affirmed a judgment refusing to enjoin a municipal water plant from charging consumers outside the city limits higher rates than those charged residents. The court noted that the rate differential had been recognized from the time when the city had bought a privately owned water company and started serving towns and consumers outside the city limits.

The parties claiming rate discrimination reside in an area completely surrounded by the city. In fact, portions of the city extend as far as four miles beyond the limits of the complaining towns. Because of this situation they relied on another case in which it had been held that a city could not discriminate against nonresidents when the sole grounds for the differential was that water was being furnished beyond the city limits.

But, said the court, that was not the grounds relied upon in the present case. It pointed out, first of all, that a municipal water plant has the right to classify consumers under reasonable classifications based upon such factors as the cost of service, the purpose for which the service is received, the quantity received, the different character of the service furnished, the time of its use, or any other factor presenting a substantial difference as a ground of distinction. Not every discrimination is illegal, only that which is unreasonable.

Basis for Differentiation

The governing statute gave cities power to extend their lines outside the city limits

under contract or under such terms and conditions as might appear to be for their best interest. This had been interpreted to mean that a city might fix such rates as it decided the situation required and that the rate could be higher for nonresidents than for residents.

In discussing the reasons for this statutory classification of residents and nonresidents in the case of a municipal plant, the court observed that even in a case where the plant is supported by revenues instead of taxes, it is the city that bears all of the responsibilities of management.

A municipal plant furnishing water to both its own residents and nonresidents at the same rates indirectly imposes a burden upon its residents which the nonresidents do not share in any way. City areas which have utility connections have higher valuations than areas which do not have them. The city levies and collects taxes upon this enhanced value. Nonresident areas, however, not being taxable at all, receive the same benefits of enhanced value from utility connections but bear no part of this additional burden. Thus, the mere fact that water is furnished would impose a tax burden upon enhanced valuation of residents which the nonresidents would entirely escape.

The rate differential was further justified by a finding that the cost of meter reading as well as the cost of fire protection service was substantially greater outside the city than within the city. *Town of Terrell Hills v. City of San Antonio*, 318 SW2d 85.

Substandard Service Reflected in Return Allowance

WEST COAST TELEPHONE COMPANY obtained only about one-half of the

\$835,000 rate increase requested of the Oregon commission. The company's pro-

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posed rate base was adjusted downward, and the claimed rate of return was not granted.

Working Capital and Tax Fund

A working capital allowance equal to 3.58 per cent of average net plant was included in the rate base. This allowance was based on the proposed working capital requirement consisting of average materials and supplies and one-twelfth of annual operating expenses.

The claimed amount was reduced, however, to an amount representing investor-supplied capital only.

The commission held that the rate base must be reduced by the amount of federal income tax reserve derived from accelerated depreciation and actually retained by the company. This reserve was contributed by the utility's customers, it was pointed out, and represents cost-free funds available for utility uses. Earlier tax savings which the company had finally paid in conjunction with claims for refund were not deducted from the rate base since they were no longer available for company use.

"Lower-range" Return

The rate of return was fixed at 6.15 per cent, which the commission described as being within the lower range of the zone of reasonableness. The rate was held down because of the company's substandard service, as shown by extensive testimony. The company was strongly urged to secure the services of an experienced firm of management and personnel consultants to

develop a program of improved executive, employee, and customer relations extending from the top executive level of the company to the remotest service area. "It is only through such a program that existing substandard service conditions can be improved sufficiently to warrant future consideration of a rate of return at a higher level within the zone of reasonableness," the commission stated.

West Coast Telephone asked for a rate of return of 6.85 to 7 per cent on total capitalization, with a return of $11\frac{1}{2}$ to $12\frac{1}{2}$ per cent on common equity. Giving effect to security issues shortly to be offered, the company's common equity stood at 32 per cent, preferred stock at 18 per cent, and debt at 50 per cent. Expert witnesses agreed that a ratio of debt and preferred stock to common equity of approximately 60-40 per cent would be a desirable goal for the company to attain.

The commission's witness thought earnings of 9 to $9\frac{1}{2}$ per cent on West Coast Telephone's common equity would be adequate. He indicated that a rate of return of 6.1 per cent on the net investment rate base would not be unreasonably low. The commission allowed a slightly higher rate, observing that it would "permit the company to service its capital structure, attract new investment capital at reasonable rates, permit accumulation of surplus funds adequate for the company's needs, and furnish a firm basis for anticipated future growth by the company." *Re West Coast Teleph. Co. U-F-2112, Order No. 36397, December 12, 1958.*



Foreign Exchange Service Order Upheld on Judicial Finding of Public Necessity

THE Oklahoma supreme court upheld a commission order directing McLoud Telephone Company, a small local utility, and Southwestern Bell Telephone

Company to furnish foreign exchange service to a large dairy operator and milk dealer in the McLoud area. The order was issued upon the dairy operator's applica-

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tion, and the appeal was brought by the local company.

The dairy operator showed that foreign exchange service was a necessity if he were to compete with other dairies, operating in nearby areas, which already had foreign exchange service. It was imperative that buyers of milk in Oklahoma City be able to call and place orders without paying toll charges. Evidence further indicated that the milk industry was the principal source of income in the McLoud area and that the applicant's business was a very important part of the industry. He purchased milk from forty-seven suppliers in the area.

On this evidence, which was undisputed,

the commission had granted the requested service, though it had omitted to find that the public convenience and necessity so required.

This, however, was no bar to the court's decision upholding the administrative order. Where the issue of public convenience and necessity is presented to the commission in appropriate proceedings and the supporting evidence is uncontradicted and leads to no other conclusion than that the public convenience and necessity have been established, the court may make the necessary finding as a matter of law, it was pointed out. *Blakeley (McCloud Teleph. Co.) v. Oklahoma Corp. Commission et al.* 332 P2d 1103.



Separate Maintenance of Self-insurance Fund

UPON learning that a city bus company, authorized to act as a self-insurer, maintained only an accounting fund on its books with which to guarantee the payment of proper claims, the Indiana commission ruled that the company must maintain a fund of \$30,000 physically segregated in a separate bank account. In an earlier order the commission had directed

the company to keep a separate reserve fund, but apparently the specific nature of the fund was not understood.

Besides keeping the fund in a separate account, the company is not permitted to make disbursements from it except by order of the commission. *Re Evansville City Coach Lines, Inc.* No. 3952-A, January 23, 1959.



Conditions of Temporary Producer Certificate Modified

UPON reconsideration of an order granting Sunray Mid-Continent Oil Company temporary producer authority and an order denying rehearing, the Federal Power Commission decided that the orders should be modified with respect to certain conditions which had been imposed. In the original order the company had been required to agree to accept a permanent certificate and also to agree to a condition that the price received for its interest in the gas produced from unitized acreage would be the price ultimately

found to be just and reasonable in a pending rate proceeding.

In view of the relationship of Sunray's proposed sales to those of another producer, The Texas Company, making sales from the same unitized acreage, the commission modified the conditions by requiring that acceptance of the temporary authority be subject to any price conditions which the commission might finally impose in the certificate proceeding, and that Sunray file an undertaking to assure refunds of any difference between a proposed

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initial price of 16.4 cents per Mcf and the price which the commission might eventually find to be required after hearing on the permanent certification.

Dissent Suggests Discrimination

Commissioner Kline dissented, asserting that while the instant order corrected one of the minor defects contained in the certificate order, it did not correct other defects. In view of the fact that the Natural Gas Act contains specific provisions as to when and under what circumstances the commission may condition certificates, and in view of the further fact that the issuance of a temporary certificate is a summary proceeding, he was of the opinion that the temporary certificate here under consideration should either be de-

nied or issued without a condition.

Sunray has a 9 per cent interest in the gas produced from the unitized acreage involved in this case, and The Texas Company has a 91 per cent interest. The latter, however, has been issued a certificate without any conditions. Sunray's contract for the sale of gas is substantially identical to that of The Texas Company and incorporates by reference all of the terms of The Texas Company contract, including the terms and provisions as to price. Commissioner Kline thought it discriminatory to issue a certificate without conditions in the one instance and to condition the certificate issued under an identical contract in the other instance. *Re Sunray Mid-Continent Oil Co. Docket No. G-16134, January 23, 1959.*

Other Recent Rulings

Alter Ego Doctrine. The California commission pointed out that it could disregard the corporate entity of a motor carrier and apply the alter ego doctrine where there is such unity of interest or ownership that the separate personalities of the corporation and the shareholder no longer exist, and when recognition of the separate corporate fiction would result in the evasion, circumvention, or frustration of regulatory law. *Re Savage Transp. Co., Inc. et al. Decision No. 57969, Case No. 6064, February 3, 1959.*

Extended Area Service. The Illinois commission commented that toll charges should be eliminated, and extended area service substituted, where adjoining exchanges have a community of interest. *Re Southwestern Bell Teleph. Co. No. 45650, February 3, 1959.*

Telephone Rate Increase. The Illinois commission approved rate increases for a telephone company which would yield a return of 2.38 per cent on net original cost. *Re Chesterfield-Medora Teleph. Co. No. 45473, February 3, 1959.*

Reparation Denied. The United States district court upheld an order of the Interstate Commerce Commission denying reparation to shippers for improperly applied rail freight rates, where a commission ruling against the railroad's application of rates was clearly intended to be for the future and not retrospective. *Capitol Packing Co. et al. v. United States et al. 167 F Supp 420.*

Showing for Carrier Certificate. The Indiana supreme court held that testimony by a contract motor carrier that the only

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change proposed in an application for a common carrier certificate was merely to operate under a common carrier tariff instead of under filed contracts was not sufficient to make out a showing of public convenience and necessity or to show that the proposed operation would not unreasonably impair the service of authorized carriers. *American Transport Co., Inc. et al. v. Indiana Pub. Service Commission et al.* 154 NE2d 512.

Dividend Restriction. In authorizing Niagara Telephone Company to issue a substantial amount of mortgage debt, the Wisconsin commission restricted the company's payment of dividends and froze officers' salaries until such time as the debt ratio should be reduced to 50 per cent, in view of a high pro forma debt ratio of 58.4 per cent. *Re Niagara Teleph. Co.* 2-SB-745, January 9, 1959.

Damages for Discrimination. The California commission denied a shipper damages for rail rate discrimination where the alleged discrimination did not fall within the long-and-short-haul rule and the shipper failed to show that a lower rate to other shippers was the proximate cause of the alleged damages. *California Portland Cement Co. v. Union P. R. Co.* Decision No. 57893, Case Nos. 5614, 5789, January 20, 1959.

Telephone Return. Upon conversion to dial operation, the Wood County Telephone Company was authorized by the Wisconsin commission to establish new rates sufficient to produce a rate of return of 6.27 per cent on a net investment rate base. *Re Wood County Teleph. Co.* 2-U-5094, February 2, 1959.

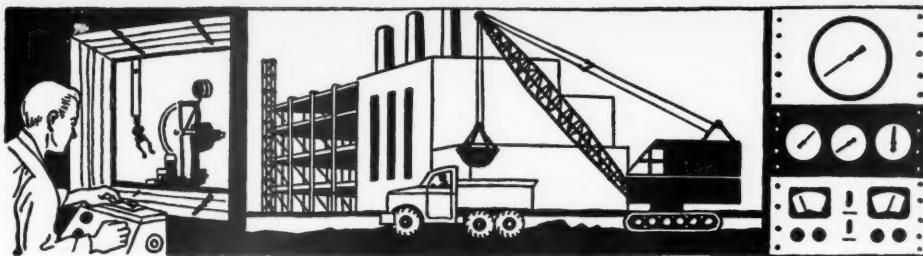
Municipal Water Plant Return. The Wisconsin commission granted a municipal water plant's application for authority to increase rates so as to produce a return of 2.1 per cent on the net book value rate base, although the commission strongly recommended further revisions in the future to provide a return between 4 and 5.5 per cent. *Re Village of Readstown*, 2-U-5129, February 5, 1959.

Municipal Water Plant Return. The Wisconsin commission considered a return of 5.5 per cent on a municipal water plant's net book value rate base reasonable. *Re City of Neenah*, 2-U-5078, February 6, 1959.

Two-step Rate Increase. The Wisconsin commission granted a telephone company a two-step rate increase, the first step to produce a return of 6.52 per cent on the net investment cost rate base and the second step, conditioned upon acquisition of specific plant and property, to produce a return of 6.57 per cent. *Re Lisbon Teleph. Corp.* 2-U-5101, February 9, 1959.

Net Book Value Rate Base. The Wisconsin commission held that net book value of a municipal electric plant's property plus materials and supplies and working capital, and minus customer contributions, constitutes a reasonable and proper rate base. *Re City of Oconomowoc*, 2-U-5096, February 12, 1959.

Telephone Company Return. The Wisconsin commission considered a return of 6.5 per cent on a telephone company's net book value rate base reasonable. *Re Oconto Rural Teleph. Co.* 2-U-5113, February 13, 1959.



Industrial Progress

C.&P. Telephone Plans \$375,000 Expansion

HOLMES VOGEL, vice president in charge of The Chesapeake and Potomac Telephone Company, has announced that the company's board of directors has approved the expenditure of \$375,000 for plant additions and improvements in the District of Columbia.

Major portion of this appropriation will be used to provide additional dial equipment in the Anacostia and Lincoln wire centers, and for additional outside cable in the Georgetown area.

Babcock & Wilcox Robots Will Assist Nuclear Energy Development

MECHANICAL robots which respond to sound and perform many man functions will soon be operating in Lynchburg, Virginia. As developed by The Babcock & Wilcox Company's Atomic Energy division and the B&W Research and Development Center, Alliance, Ohio, the automations are being designed to perform reactor maintenance and repair operations in radiation fields too "hot" for man.

The robots are one phase of a facility established by B&W to develop prototypes of equipment required to maintain advanced types of reactors that will use circulating liquid metal as the atomic fuel. Known as the Engineering Prototype Development Facility, the unit is part of a contract B&W holds from the U. S. Atomic Energy Commission to study, develop, and build a circulating-fuel reactor experiment.

Consisting of six units, the robots will be independently and remote-controlled by radio signals from a "master brain" control console. A closed-circuit television system, built

by Diamond Power Specialty Corporation, a four feet-thick lead glass window will make the radio-active work area easily visible in the control room of the reactor.

Largest and most complex of the robots is a three-ton, eight feet-high fork-lift truck with three arms especially adapted to the atomic age functions they will perform. The most versatile of the three arms is a mobile manipulator capable of duplicating many human wrist and arm functions. The two auxiliary arms can easily lift a small wrench or a 1000 pound object 15 feet in the air.

The other electronically-controlled units are a tow truck for transporting radioactive loads; a pipe welder that can complete a high-integrity, six-inch weld in 30 seconds, equipped with a television "eye" which permits examination; a pipe cutter that can cut a 10-inch diameter pipe; and a 50-ton "flying rope" crane with a drive mechanism located in an accessible position behind the radiation shield rather than on the bridge in a radioactive work area.

Separate panels manned by two specially trained technicians provide remote control points for the robot maintenance force. Push-button messages are fed into an electronic grid complex which, in turn, transmits coded commands ultrasonically to the robots. Commands are then decoded by the units and carried out. Similar to the "walkie-talkie" technique, the audio-system is also capable of sending operational sounds to the control panel operators.

Industry Council To Aid G-E High Voltage Project

A 14-man advisory council representing major electric power systems of the United States and Canada has been named to help guide Project

EHV, General Electric's five-year experimental program in extra high voltage power transmission.

The Edison Electric Institute is represented by its task force on EHV transmission: L. R. Gaty, Philadelphia Electric Company, chairman; W. R. Johnson, Pacific Gas and Electric Company, San Francisco; L. F. Lischer, Commonwealth Edison Company, Chicago; Edward R. Moore, Detroit Edison Company; W. S. Price, American Electric Power Company, New York; L. M. Robertson, Public Service Company of Colorado, Denver; E. A. Rothfus, Ohio Edison Company, Akron; and J. H. Vivian, Southern California Edison Company, Los Angeles.

Other members of the advisory council are K. E. Hapgood, Tennessee Valley Authority, Chattanooga, Tenn.; E. E. Kanouse, City of Los Angeles Department of Water and Power; Eugene C. Starr, Bonneville Power Administration, Portland, Ore.; J. J. Archambault, Quebec Hydro-Electric Commission, Montreal; Dr. H. M. Ellis, British Columbia Power Engineering Company, Vancouver; and J. H. Waghorne, Hydro-Electric Power Commission of Ontario, Toronto.

Construction will start this spring on the 4½-mile transmission line near Pittsfield to carry power at a maximum of 750,000 volts.

The advisory committee will help in determining the investigations and tests to be performed to reach these super-voltages in separate steps, starting at 460,000 volts.

General Electric's Power Transformer Department at Pittsfield is coordinating the \$5 million project for the 15 G.E. departments and five co-operating companies that are contributing funds, equipment or engineering talent. Cooperating firms in-

(Continued on page 20)

INDUSTRIAL PROGRESS—(Continued)

clude Western Massachusetts Electric Company, which will later take over and operate the EHV line as part of its transmission system; Aluminum Company of America; Stone and Webster Engineering Corporation; American Bridge Division of United States Steel; Rilco Laminated Products Inc. and Weyerhaeuser Timber Company.

Stone & Webster Engineering Promotes Top Executives

PROMOTION of two top management executives in Stone & Webster Engineering Corporation was announced recently by T. Cortlandt Williams, president.

Fred W. Argue, engineering manager and a vice president, was elected executive vice president of the worldwide engineering and construction organization. As senior officer in the Boston office he will assume full responsibility for the executive coordination of the activities of the corporation at that location.

Alfred L. Hartridge, treasurer and a vice president, was elected financial vice president and will make his headquarters in the New York office where, in addition to his other responsibilities, he will coordinate the financial activities of the corporation's various domestic and foreign subsidiaries.

Both men are directors of Stone & Webster Engineering, which Mr. Argue joined in 1941 as a power engineer and Mr. Hartridge as a field engineer in 1931.

In announcing actions of the board of directors, Mr. Williams reported the election of Richard N. Benjamin, president of Stone & Webster, Inc., as a director of Stone & Webster Engineering and the appointment of F. E. Conger as assistant secretary.

Stone & Webster Engineering Corporation designs and builds nuclear facilities, steam and hydroelectric power plants, petroleum refineries, chemical processing plants and other types of industrial facilities in all parts of the world.

Engineering In Action At A-C—1958 Review Released

ENGINEERING progress and achievements of 1958 are graphically described in the new addition of Engineering In Action at Allis-Chalmers, annual publication recently released by the Milwaukee firm.

The 36-page, two-color magazine is

produced by the Industries Division of the company. The divisions' products include equipment for the generation, transmission and distribution of electric power, as well as a wide variety of equipment for all industries.

Covering all phases of activities within the Industries Division, the magazine includes chapters on research, power generation, nuclear power generation, power transmission and distribution, metals and mining, chemical and petroleum, general industry, government and marine, plant facilities, operations in Canada, and Allis-Chalmers International.

New Roller-Smith Catalog

A NEW eight-page General Products Bulletin has been published by Roller-Smith, Inc., a subsidiary of Federal Pacific Electric Co.

Covered in the two-color catalog are Roller-Smith's lines of electrical indicating instruments, and distribution and control equipment.

Included are: oil circuit breakers (from 50,000 to 250,000 interrupting kva); subway switches (from 800 amps to 50,000 kva interrupting capacity, both weatherproof and submersible, manually and electrically operated); precision balances; rotary switches; and panel, switchboard and portable instruments.

Copies may be obtained from Federal Pacific Electric Co., 50 Paris St., Newark 1, New Jersey.

Coal-burning Gas Turbine Research and Development Program

IN order to increase the overall efficiency of steam-cycle power generating plants supplying billions of kilowatt-hours of electricity to the Nation and to provide power generating facilities for the vast arid regions of the West, the U. S. Bureau of Mines is preparing to conduct research and development to establish the feasibility of the coal-burning gas turbine for power generation in stationary plants, according to an announcement by Colonel R. B. White, Chairman of the Locomotive Development Committee of Bituminous Coal Research, Inc.

The stationary plant development program planned to be conducted at the Morgantown, W. Va. Station of the U. S. Bureau of Mines will take advantage of more than 12 years of research and development carried out by the Locomotive Development Com-

mittee of Bituminous Coal Research Inc. Approximately \$5½ million has been spent since 1954 by coal companies and railroads sponsoring the Locomotive Development Committee program. More than 100 patents issued and approximately 25 patents pending are being made available to the Bureau of Mines. The Locomotive Development Committee is lending the Bureau of Mines a full-size 4,200 horsepower gas turbine installation valued at \$1,200,000.

Colonel R. B. White, Chairman of the Board of the Baltimore and Ohio Railroad Company and Chairman of the Locomotive Development Committee of Bituminous Coal Research Inc., under whose direction the coal burning gas turbine research and development program has been operated, told the Bureau that the original objectives of proving the feasibility of a direct fired coal-burning gas turbine have been successfully achieved.

At the beginning of the project to develop the coal-burning gas turbine for motive power use, three basic problems existed:

1. Feeding coal to the combustible chamber at elevated pressures.
2. Burning coal at high temperatures and pressures.
3. Ash control and elimination.

Colonel White said that coal combustion at elevated temperatures and pressures was accomplished at combustion efficiency of 97 per cent in a film cooled jet airplane type combustion chamber of special Locomotive Development Committee design. He indicated that ash control was accomplished through the development of a high efficiency dust collection system by the Locomotive Development Committee and by turbine design that controlled gas flow through the turbine to minimize erosion and give turbine life satisfactory for locomotive use. The coal feeding problem was solved by a Locomotive Development Committee coal pump that provided metering and pressurized feeding of the pulverized coal.

Colonel White said that the 4,200 horsepower gas turbine plant has been operated more than 5,000 turbine hours since 1950, and that the work of the Locomotive Development Committee has been so successful that the Union Pacific Railroad has announced that they will build a coal-fired turbine locomotive, incorporating designs developed by the Locomotive Development Committee.

(Continued on page 22)

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INDUSTRIAL PROGRESS—(Continued)

The work of the Bureau of Mines, according to Director Marling J. Ankeny, will be carried out in cooperation with industry. Taking advantage of the prior cooperative work of the coal companies and railroads associated with the Locomotive Development Committee and to conserve natural resources through more efficient use of the huge coal reserves available in the United States, the Bureau of Mines program will be concerned with the development of a coal-burning gas turbine plant design capable of fulfilling the long life requirements of stationary plants. Under the Bureau's program, even better fly ash control will be sought even though the Locomotive Development Committee has already attained dust collection efficiencies exceeding 92 per cent at high pressures and at elevated temperatures. The Bureau of Mines will work toward improving turbine blade design and improving materials of construction in its attempt to extend the life of gas turbine blades.

The stationary plant research and development by the Bureau of Mines will be based on and will extend technical knowledge and experience resulting from the Locomotive Development Committee program. Not being restricted by the space limitations of a locomotive chassis, plant design changes to provide durability and economy are expected to be possible.

Present sponsors of the Locomotive Development Committee of Bituminous Coal Research, Inc., whose support has been responsible for the coal-burning gas turbine equipment and technical knowledge being made available to the U. S. Bureau of Mines, include six railroads and four coal companies.

The railroads are: The Baltimore and Ohio Railroad Co., The Chesapeake and Ohio Railway Co., The Illinois Central Railroad Co., The Louisville and Nashville Railroad Co., The Norfolk and Western Railway Co., and The Virginian Railroad Co. The coal companies include: Consolidation Coal Co., Island Creek Coal Co., The M. A. Hanna Coal Co., and The Pocahontas Fuel Co. (recently merged with Consolidation Coal Co.).

Gibbs & Hill Names Two Assistant Vice Presidents

O. W. KAYSER and Peter H. Smith have been appointed assistant vice presidents of Gibbs & Hill, Inc., consulting engineers with principal offices

at Pennsylvania Station, New York 1, N. Y.

Mr. Kayser, whose total service with Gibbs & Hill is 29 years, has been supervising project engineer in charge of railroads and electric transmission since 1957. As assistant vice president, he continues this responsibility.

During the last 8 of his 13 years with Gibbs & Hill, Mr. Smith has been chief project engineer, the capacity in which as assistant vice president he will continue to serve.

G-E to Build New Steam Turbine Balance Testing Facility

PLANS for the construction of a \$600,000 steam turbine balance test facility were announced recently by General Electric Company's Medium Steam Turbine, Generator and Gear Department.

The new facility is scheduled for completion late this fall and will be capable of testing marine propulsion turbines as well as land steam turbines for power generation installations at speeds up to 10,000 revolutions per minute.

According to A. T. Chandonnet, General Manager of the Department, the new test and balance procedure scheduled for operation in the facility will reduce installation time and insure smoother operation of the turbines.

Steam turbines ranging in size from over one yard in length to 22-feet long, and weighing from 4400 pounds to 30 tons will be tested in the new facility.

Honeywell Enters Medium Computer Field With '800'

MINNEAPOLIS - HONEYWELL Regulator Company has entered the medium-scale computer field with a new transistorized system "so flexible it can do data-processing and scientific computation simultaneously at lightning speeds," according to Paul B. Wishart, Honeywell president.

The system, called the Honeywell 800, establishes several "firsts" in the art of computer design, the announcement said, "the most important being a new ability of its small, powerful central processor to independently perform more than one job at a time." This ability, called "Automatic Parallel Processing," is combined with a building-block expansion principle of design promising "unprecedented economies" for growth companies needing versatility in handling current and future paperwork, it was explained.

"We are proud to announce the development of a system which provides the kind of economic flexibility that will process more data per dollar processor than any other on the market," said Wishart.

"This announcement is the result of far-reaching decisions by our scientists to expand our operations into the broader market of medium-scale computers, backed by the necessary research and development funds, the best skills of our scientists and the know-how of our manufacturing sources," Mr. Wishart said. "We firmly believe that progress in electronic data processing and scientific computation will prevent American business and government from choking to death on its own paperwork. We are determined to apply our long years of experience in the design and manufacture of electronic systems to this problem."

Previously the firm specialized through its Datomatic Division in Boston—in production of the large scale system known as the Datamat 1000. The new system also was developed and will be produced at the Datomatic plant with first deliveries scheduled for the third quarter of next year.

The Honeywell 800 can perform both scientific and data-processing work simultaneously, and in less time than it would take any other system to do either, it was announced.

"Careful market analysis has established that this is an exclusive benefit most needed by medium-to-large companies with a growth potential, as there are more than 30,000 such companies," Mr. Wishart said. "Added and to other qualities of what we consider to be a matchless medium-scale system, this feature reduces confusion in scheduling work on to the computer and insures present and future savings as office paper-work grows. These savings will rise sharply as a company's and its use of the system expand year-by-year."

The system's advantages hinge on two breakthroughs in the art of computer design which make possible Automatic Parallel Processing, it was explained. This is what enables the system's central processor (its computing heart) to perform up to eight separate and independent jobs at the same time in contrast to the one-at-a-time abilities of conventional systems.

The two electronic innovations making up Automatic Parallel Processing are called "Traffic Control" and "Multiplexing."

INDUSTRIAL PROGRESS—(Continued)

ence and "Multi-Program Control," M-H officials explained.

Traffic control allows the central processor to communicate simultaneously with as many as eight input and output devices, such as punch-card readers, printers or magnetic tape read/write units. This eliminates the bottlenecks caused by the comparatively slow speeds of supporting equipment, and thereby provides a flexibility which makes it profitable to use smaller, less costly peripheral equipment.

Multi-program control is a further refinement, providing a new ability to use the system's computer power fully and at all times. It enables the Honeywell 800 to divide itself into as many separate computers as there are jobs to be run simultaneously, up to a total of eight in cases where a company's needs grow to that extent.

Thus, Automatic Parallel Processing results in the machine's ability to process several programs at once without danger of any one job's interfering with the efficient performance of concurrent work.

Kaiser Aluminum to Move Sales Office to Oakland

KAIER Aluminum & Chemical Corporation plans to move its general offices from Chicago to Oakland, California, within the next few months.

Bringing together of all of Kaiser Aluminum's policy-making groups in one management, production, sales and market development in one headquarter will make possible more coordinated and effective action in the selling of aluminum products.

Added and effective action in the selling of aluminum products is what lies ahead in the aluminum industry," John Menz, the company's new president for marketing, declared in making the announcement.

It will enable the corporation to

increase its marketing effectiveness, and to speed up decisions on

and year-round operations involving more than one department of the corporation's management.

Kaiser Aluminum plans to retain in Chicago its present regional and district sales headquarters, and to maintain an executive office there. In order to continue to effectively serve the important Midwestern and Eastern markets, some personnel whose activity is primarily concerned with technical and field service will also remain in Chicago.

The move to Kaiser Center in Oakland will be accomplished in planned

stages, with completion scheduled for about September 1.

Installation Combines Meter With Gas Light

A TWO-BIRD WITH ONE-STONE installation plan that places the residential gas meter at the base of an exterior gas light post has been developed by the Rochester Gas and Electric Corporation at Rochester, N. Y.

The arrangement, worked out by engineers under the direction of Frederick J. Pfluke, general superintendent of the utility's gas division, permits meter reading without entering the home, and without depending on such alternatives as exposed meters on the outside of the dwelling or a window to permit the reader to see the meter inside the building.

A small, inconspicuous window at the base of the lamp permits reading the meter dial.

A test installation has been made in front of a house under construction in Rochester, with the post-mounted gas light to be added when the dwelling is completed. In some cases, according to Pfluke, it may be possible to route gas supply lines through back yards to permit the meter-gas light combination there and also have a readily available fuel supply for other gas appliances to be used outdoors.

A number of gas barbecue grills now are available or are being readied for this summer's markets. Additionally, an industry committee is considering installation standards for gas incinerators outdoors.

Inexpensive installation techniques utilizing copper tubing have been developed for gas lights and grills located outdoors and connected to the gas supply in the dwelling. Arrangements such as the Rochester utility's are seen as making it still easier for gas utility customers to use the fuel outdoors.

Appliance and equipment manufacturers see enormous market potentials in gas serving the "backyard living" that has become virtually a way of life for countless families.

Progress on Experimental Nuclear Reactor on Schedule

THE board of directors of the Carolinas Virginia Nuclear Power Associates Inc. were told recently that progress on the planning and construction of an experimental nuclear

reactor is on schedule.

Harry Ferguson, general manager of the non-profit company, made his report at a regular meeting of the Board at the offices of Virginia Electric and Power Company, a member of the Associates.

CVNPA, a non-profit corporation composed of four utilities in Virginia and North and South Carolina, is building an experimental nuclear power station at Parr Shoals, South Carolina. Scheduled for completion in June 1962, the station will provide research and engineering experience for practical uses of atomic energy in electric generation.

Members of the Associates, in addition to Virginia Electric and Power Company, are: Duke Power Company, Carolina Power and Light Company, and South Carolina Electric and Gas Company.

Erwin H. Will, chairman of the Executive Committee of Vepco, is president of CVNPA.

Federal Pacific Names Marketing Executives

FEDERAL Pacific Electric Company, Newark, N. J., has announced the following series of staff appointments in its recently established corporate marketing organization. These executive promotions are designed to provide better headquarters support for Federal Pacific's customer oriented field sales activities, according to R. L. Bobo, vice president—marketing.

Gordon E. Benson, formerly marketing manager—General Products Department, moves to Scranton, Pa., as marketing manager for the company's Eastern Switchgear Division.

Replacing Benson as marketing manager—General Products Department is Harry W. Ashman, former field engineer at the company's New York City sales office.

Leopold Van Blerkom has joined the company as marketing manager—Instrument Department taking charge of all sales and promotional activities connected with the electrical instrument lines of Federal Pacific and its subsidiary, Roller-Smith, Inc. He was previously Project Manager at Daystrom Inc.'s Industrial Division.

Richard S. Smithley has been promoted to the position of Marketing Manager—Relays. An expert on utility transmission systems, Smithley has worked on problems of relay protection for the past twenty-three years with Ebasco International Corp. and the Duquesne Light Co. of Pittsburgh.

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- A new and different approach to the educational needs of utility employees — called THE P.U.R. GUIDE—is now widely in use throughout the industry. Somewhat descriptively, the GUIDE is referred to as "a journey of understanding." It takes the user through the economics of public utilities and through many other non-technical phases of utility operation. It was organized by and is issued under the general supervision of an experienced staff of specialists.
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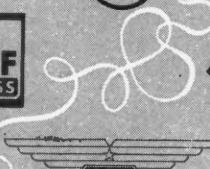
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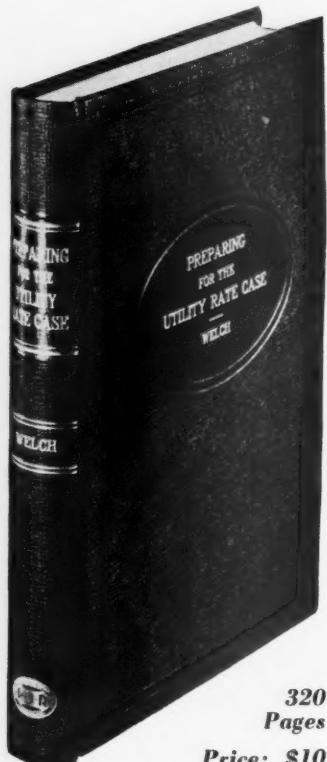
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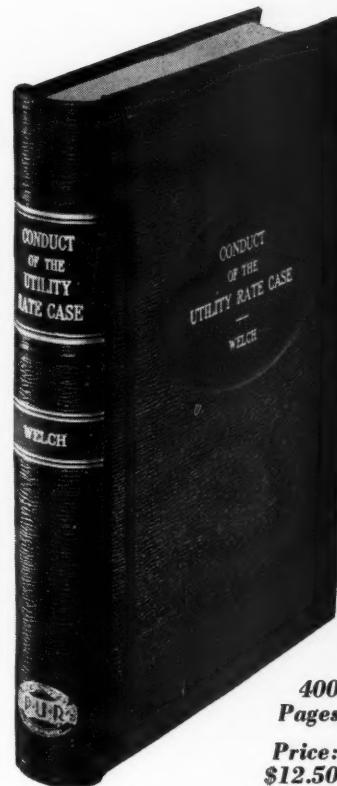
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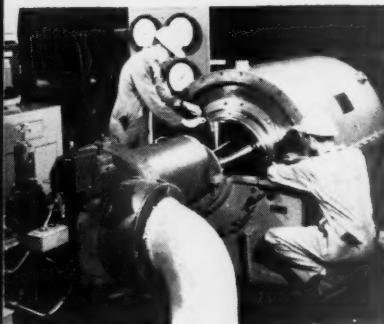
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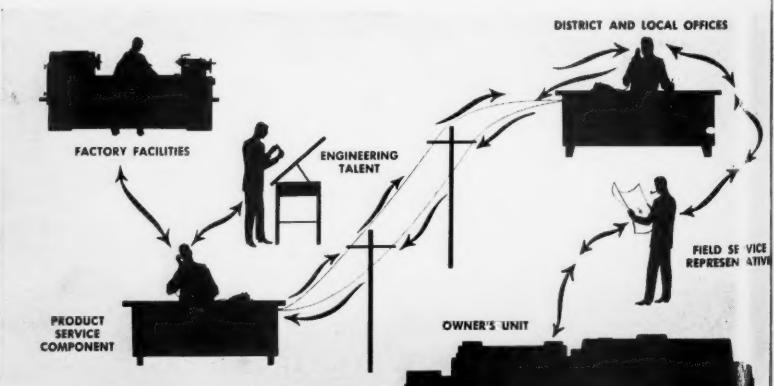
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